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CHINESE CARS
Joint ventures the only way forward
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World News

Dissident playwright jailed by Czech court

Dissident Czechoslovak playwright Vaclav Havel was sentenced to a nine-month jail term by a Prague court on charges of incitement and obstructing a public official.

Havel was arrested during demonstrations marking the 20th anniversary of the self-immolation of student Jan Palach in protest against the Soviet-led invasion of Czechoslovakia in 1968. Page 2

Hirohito controversy

A fresh row over the role played by Japan's late Emperor Hirohito in the Second World War has broken out two days before his state funeral. Background and story, Page 20

Pasok pact sought

Greek opposition Communists have begun to woo elements within the ruling Socialist party (Pasok) for the possible formation of a broad left-wing coalition Government after June's election. Page 2

Thatcher visit

Hundreds of police and troops threw a massive security ring around central Belfast, Northern Ireland, as UK Prime Minister Margaret Thatcher flew in for a memorial service for 47 people killed in a British air crash last month.

BR admits failures

British Rail, UK state-owned rail network, admitted to an inexcusable catalogue of failures leading to last year's rail crash at Clapham Junction, London, in which 35 people died. Page 7

Traffic control plan

Western Europe's scheduled airlines launched a campaign for a single air traffic control system to ease congestion and halt worsening delays for passengers. Page 2

Peace talks stall

A second round of multilateral peace talks on Kampuchea ended without any new agreements after negotiators failed to bridge differences among the warring factions. Page 4

Soviet admission

A top Soviet official has for the first time confirmed that shoddy construction was a prime factor behind the huge death toll in the Armenian earthquake. Page 2

Hong Kong warning

Sir David Wilson, Governor of Hong Kong, is expected to warn Mrs Margaret Thatcher, UK Prime Minister, that Hong Kong may eventually have to introduce forcible repatriation of Vietnamese boat people who do not qualify as refugees. Page 4

Albanians strike

Thousands of ethnic Albanians went on strike throughout Yugoslavia's Kosovo province demanding the sacking of regional Communist Party chief Rahman Morina.

Crime tax proposed

New South Wales, the most populous state in Australia, will introduce legislation to impose a "crime tax" on people convicted of serious offences.

Bodyguards charged

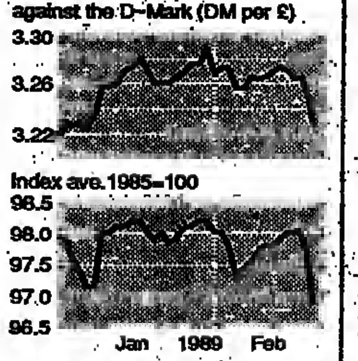
Two members of black South African nationalist Winnie Mandela's bodyguard, the self-styled Mandela United Football Club, appeared in court charged with murdering 14-year-old Stompie Seipei. Page 4

Business Summary

Darman says US thrifts rescue will cost $126bn

US GOVERNMENT rescue of savings and loan institutions, or thrifts, is expected to cost $126.2bn over the next 10 years, Mr Richard Darman, the budget director, said. In his most explicit statement to date, Mr Darman told the Senate budget committee that the net cost of the bail-out to tax payers would be $89.9bn. The balance would be met by the S&L industry and $60m of bond sales. Page 3

STERLING broke through a key support level of DM3.2450 in currency markets yesterday and fell sharply to around DM3.2200 in the afternoon. A recent reduction in favourable interest rate differentials and concern about the rise in UK inflation has prompted many investors to switch out of sterling. Currencies, Page 42



TECHNICAL experts from six oil-producing countries meeting in London agreed to limit oil exports during the second quarter of the year in order to lend support to efforts by the Organisation of Petroleum Exporting Countries to stabilise oil markets. Page 20

CITY of London investment institution recommended its investment clients to vote in favour of MB's plan to merge its Metalbox Packaging subsidiary with Carnaud, a French packaging company. Page 21

PROTAGONISTS in the four-month battle for control of Société Générale, privatised French banking group, were close last night to reaching a final agreement to settle their differences. Page 21

TEXAS EASTERN stock soared in response to an offer of $3.22bn for the Houston-based energy group from a smaller local gas pipeline group, Panhandle Eastern. Page 21

EUROPE'S leading car producers are putting pressure on Sir Leon Brittan, European Commissioner for competition, to place strict limits on any state aid to encourage Toyota, Japanese car maker, to build a plant in the EC. Page 6

DEERE, world's largest maker of farm equipment, reported a sharp increase in earnings from operations with a strong foreign performance offsetting lower North American sales. Page 24

MONTEDISON, Italian group, failed to secure 100 per cent control of Ausimont, its Wall Street-quoted speciality chemicals subsidiary. Page 24

AECI, South Africa's largest diversified chemicals group, lifted sales in 1988, helped by stronger domestic market demand and better export market prices. Page 25

KOOR INDUSTRIES, leading Israeli group which recently reached agreement with its creditors on a debt rescheduling programme, forecast a return to operational profitability this year, after heavy losses in 1988. Page 25

SKANDINAVISKA Enskilda Banken and Svenska Handelsbanken, Sweden's two largest commercial banks, reported higher profits for 1988 helped by increased volumes in lending. Page 28

Bush refuses to be 'stampeded' into Mideast peace plan

By Peter Riddell, US Editor, in Washington

THE US will not be "stampeded" into producing new peace proposals for the Middle East by the latest Soviet plan, President George Bush said yesterday.

Addressing a White House press conference, Mr Bush reacted with irritation to suggestions that the Soviet Union had taken the foreign policy initiative from the US, particularly in the Middle East, following the current visit to the region by Mr Eduard Shevardnadze, Soviet Foreign Minister.

"I don't want just to send somebody charging off on a mission to counter Mr Shevardnadze's trip. Let's do something that's going to have results. I don't want to be stampeded by the fact that the Soviet Foreign Minister takes a trip to the Middle East. In my view that's a good thing," he said.

However, Mr Bush stressed that he thought the Soviet Union should have only a limited role in the Middle East.

He underlined his Administration's gradualist approach to Middle East peace talks. The US wanted to encourage discussions between King Hussein of Jordan and Israel and to build on progress already made, including the changes in the Palestine Liberation Organisation's attitude, he said.

The US prefers a step-by-step approach rather than taking what it sees as the risk of moving quickly towards an international conference.

"Talks on the Middle East will probably be the most important of some 20 bilateral meetings with heads of state and government which President Bush will be holding in Tokyo on Thursday and Friday when he attends the funeral of Emperor Hirohito. He will meet King Hussein, President Hosni Mubarak of Egypt and President Chaim Herzog of Israel.

President Bush gives a thumbs-up in support of John Tower, his choice for the post of US Secretary of Defence. Report, Page 3

More generally, Mr Bush and his senior foreign policy advisers are evidently annoyed at suggestions by some US commentators that the Soviet Union is making the running on foreign policy.

Mr Bush defended the reviews of foreign policy currently under way concerning East-West relations and South America and said Mr James Baker, the Secretary of State, had reported after his eight-day tour of Europe that Nato countries still looked to the US.

Mr Bush also brushed aside recent fears about the level of Japanese investment in the US. He noted that Japan was the third largest holder of investments in the US behind the UK and the Netherlands and stressed that it was important for the US to believe in open markets to obtain investment and to knock down barriers to US producers and investors overseas.

The US should not be so concerned over foreign ownership that it "undermined securities markets in this country" which depend on foreign as well as domestic capital.

Later, at a briefing on the President's six-day tour to the Far East, Mr Brent Scowcroft, National Security Adviser, said the Administration was not trying "to make quick headlines." Instead, the current reviews were intended to look forward.

Bush endorses Tower, Page 3; Moscow shuttle, Page 4

Greenspan rejects call for easier monetary policy

By Anthony Harris in Washington

CALLS FOR an easier monetary policy in the US were firmly rejected yesterday by Mr Alan Greenspan, chairman of the Federal Reserve, the US central bank, when he presented the Fed'a twice-year monetary report to the Senate banking committee.

He described the present inflation rate as "not acceptable" and warned tbat any attempt to drive down interest rates would raise inflationary expectations, leading to higher inflation rates in the long run.

However, the official Fed projection of inflation, at 4.5 per cent to 5 per cent, was lower than markets expected, after last week's remarks by Mr Gerhard Stoltenberg, West German Finance Minister.

The Fed governors, in their official report, said they expected less growth and higher inflation than the Administration, but added: "The differences are not large."

Mr Greenspan presented a generally positive picture of the economy, but warned that growth was near the limits of capacity, and that there had been an increase in inflationary pressures.

"Tbe economic expansion remains vigorous and unusually well balanced after more than six years," he said. "There are few of the tell-tale distortions, such as widespread inventory overhangs or constricted profit margins, that typically have signalled the last stages of expansions. But... the risks seem to be on the side of a further strengthening of price pressures."

He said Fed policy aimed to achieve maximum sustainable growth over time; price stability required that overall demand should be in line with aggregate snpply. Monetary policy could check excessive demand, but it could not increase the growth potential of the economy, he said.

Faster growth, he said, should be achieved by policies to improve supply, through higher saving and investment.

Simon Holberton in London adds: The dollar fell sharply on Mr Greenspan's evidence amid disappointment that be did not give a firmer indication that US interest rates would rise.

In Europe, the US currency declined to a low of DM1.8350 before recovering to close in London virtually unchanged at DM1.8420. In London the pound closed 2½ pfennigs lower at DM3.2250.

Markets, Section II

VW in 10-year programme to revamp SEAT

By Kevin Done, Motor Industry Correspondent, in London

VOLKSWAGEN of West Germany, the leading West European car producer, is planning to invest Pta670bn ($5.8bn) over the next 10 years in SEAT, its Spanish subsidiary.

VW is aiming to transform the Spanish company, which previously suffered heavy losses, into one of the most coat-effective producers of small cars in Europe.

It plans to increase production by a third to about 570,000 vehicles a year by 1994 compared with 433,000 last year, increasing SEAT's share of the West European new car market from 2.1 per cent last year to about 3.5 per cent.

SEAT is also aiming to reduce its 23,700-strong workforce to 19,000 by 1995, according to Mr Juan Antonio Diaz Alvarez, chairman of the SEAT management board.

Volkswagen acquired 75 per cent of SEAT from the Spanisb state in 1986 and is committed to taking over 100 per cent control by the end of 1990.

The 10-year plan involves capital investment of Pta518bn with a further Pta150bn on model development and project implementation.

SEAT is to build a Pta220bn car assembly plant at Martorell, near Barcelona, with a capacity for producing 1,500 cars a day on three shifts.

Construction will begin later this year and the plant is expected to start production by the end of 1992. At the same time VW is spending heavily to integrate SEAT into its global automotive operations, so that fnture models can he based largely on VW components, most importantly VW engines and transmissions.

SEAT is also to invest Pta142bn over the 10 years at its out-dated main production plant at Zona Franca, Barcelona, whicb will become the main Spanish source for pressings and sub-assemblies for the Martorell plant as well as for SEAT's existing Pamplona car plant.

The bulk of the investment at Zona Franca will be over the next four years. SEAT plans to introduce at the end of 1990 a top-of-the-range car based on the VW Jetta chassis and powertrain but styled by Ital Design, the Turin-based design house led by Mr Giorgio Giugiaro. Initially it will be assembled at Zona Franca.

Ital Design is also designing a replacement for SEAT's best selling Ibiza supermini, which will be assembled at the Martorell plant. It is due to be launched in late 1992 or early 1993.

About Pta37bn is to be invested in the Prat, Barcelona transmissions plant whicb is to produce VW-designed transmissions.

SEAT is planning to dispose of many of its small volume components operations to outside suppliers. It is seeking to remove components operations involving a workforce of about 3,000 in a four-year programme to the end of 1992.

The company was planning to import basic engines from VW engine plants elsewhere in Europe or overseas, Mr Diaz Alvarez said, hnt engine assembly would be completed on lines to be installed at the Martorell and Pampiona plants.

Output could be considerably higher tban the 570,000 vehicles a year by 1994 envisaged by the 10-year plan if VW decides in the early 1990s to locate its entire VW Polo small car production at SEAT's Pamplona assembly plant.

VW's China connection, Page 6; Survival of the fittest, Page 19; US carmakers, Page 21

Iran recalls EC ambassadors

By Victor Mallet and Philip Stephens in London

IRAN yesterday announced the withdrawal of all its ambassadors from European Community countries

The Iranian Foreign Ministry said the move was in retaliation for this week's EC decision to withdraw ambassadors and heads of mission from Tehran in the wake of Iran's call for the death of Mr Salman Rushdie, the Indian-born British writer.

Iran claims that Mr Rushdie's best-selling book, The Satanic Verses, insults the Islamic religion and the Prophet Mohammed.

As British Embassy staff prepared to leave Iran last night, Britain hardened its stance and said Iran had been asked to withdraw its two diplomats from London. Previously Britain said only that it would be pointless for them to stay.

Sir Geoffrey Howe, the British Foreign Secretary, told an approving House of Commons that normal relations with Iran could not be restored until it met its international obligations, in particular "by renouncing the use or threat of violence against citizens of other countries."

Sir Geoffrey, who was strongly supported by Labour and other opposition parties, told the British Parliament

Continued on Page 20

Full-function pocket

US and British-based electronics companies are in a race to build the first full-function personal computer to fit the executive pocket, physically and financially, writes Alan Cane in London.

Atari, the US-based computer manufacturer, yesterday made a pre-emptive strike, announcing a tiny compnter, less than a pound in weight and only 8 inches by 4 incbes, which it claimed was compatible with the industry standard personal computer (PC) made by International Business Machines (IBM).

Analysts argue, however, that the machine falls short of true compatibility and full functionality.

It runs versions of popular software packages rather than the originals.

Within weeks competition will come from Poqet Computer Corporation, a year-old US company based in Sunny-

Continued on Page 20

County NatWest loses £56m despite record group earnings

By David Lascelles, Banking Editor, in London

COUNTY NatWest, tha troubled investment banking arm of Britain's National Westminster Bank group, made a loss of £56m ($99m) last year, though this was overshadowed by the record £1.4bn earned by the group as a whole.

Announcing the results yesterday, Lord Boardman, tha chairman, said the loss did not deter NatWest from its aim of creating "a successful and profitable investment banking business", though it was not certain whether County would make a profit this year either.

He revealed County'a losses included £18m from its 9.5 per cent holding in Blue Arrow, the employment services company whose unsuccessful rights issue County managed in late 1987.

Lord Boardman refused to comment on the Government'a Department of Trade and Industry inquiry which has been launched into the rights issue for possible breaches of disclosure rules. But he said suggestions that NatWest had been economical with the truth abont Blne Arrow were "totally unjustified", and that much of the speculation in the press about what had happened was "wide of the mark".

The profits from the UK's largest clearer confirmed that the high street banks benefited from the lending hoom last year, but are now being squeezed by increased competition and higher interest rates.

Comparisons with NatWest's previous results are not possible because, in common with other banks, it made exceptional provisions for Third World debt in 1987. But Lord Boardman said the underlying increase in NatWest's earnings was 15 per cent, which he called "an impressive performance in particularly challenging market conditions."

This included a 9 per cent rise in domestic banking profits to just over £1bn. One division which reported lower profits was home lending, where business eased in the latter part of last year as the housing market cooled off. International banking returned to profit after the previous year's heavy Third World-related losses, though the result was marred by losses in a Swiss subsidiary dne to a fraud.

NatWest is to make a novel one-for-one bonus share issue to reflect the capitalisation of some £600m in revaluations of its considerable property holdings. The move, which will transform latent property values into equity, was made possible by new international rules on bank capital agreed by the Basle Committee last year. Analysts said yesterday other banks are certain to try something similar as it enabled banks to boost their capital ratios without making rights issues.

Lex, Page 20. Barclays, Page 8. NatWest reckoning, Page 30.

MARKETS

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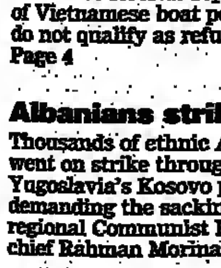
Jacobson & Ponsbach Index



STERLING
New York lunchtime
$1.745
London:
$1.7505 (1.7635)
DM3.225 (3.2500)
FFr10.985 (11.0750)
SFr2.745 (2.7625)
Y221.75 (223)

DOLLAR
New York lunchtime
DM1.83675
FFr6.2585
SFr1.5645
Y126.575
London:
DM1.842 (1.8435)
FFr6.275 (6.28)
SFr1.5685 (1.5670)
Y126.75 (126.45)

STOCK INDICES
New York lunchtime
Dow Jones Ind. Av.
2,324.11 (-0.71)
S&P Comp
295.79 (-0.97)
London:
FT-SE 100
2,061.0 (-4.8)
World:
146.40 (Mon)
Tokyo
Nikkei Ave
31,890.09 (197)
Frankfurt
Commerzbank
1,650.7 (-10.7)

INTEREST RATES
US lunchtime:
Federal Funds 9⅝%
3-mth Treasury Bills:
yield: 8.74%
Long Bond: 97⅞
yield: 9.07%
London
3-month interbank:
close 13% (12⅞)

OIL
Brent 15-day (Argus)
$16.825 (unchanged)
(Mar)
West Tex Crude
$17.975 (unchanged)
(April)

GOLD
New York latest
Comex April
$391.0 (391.1)

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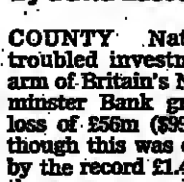
Hirohito funeral : world pays homage to a superpower



Many of the world leaders ostensibly in Japan to pay their respects at Emperor Hirohito's funeral are really paying tribute to a country that has risen from defeat in war to an economic superpower worth courting
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Talks with Kohl fail to bridge differences over Nato modernisation

Thatcher demand on nuclear arms

By David Marsh in Frankfurt

MR MARGARET THATCHER, the British Prime Minister, yesterday signalled to the West German Government that she expects a commitment by Nato in May to introduce new short-range European nuclear missiles in the 1990s.

At a news conference in Frankfurt with Chancellor Helmut Kohl, she pointedly warned of the consequences which could ensue if Nato made the "wrong decisions" about bringing in new weapons systems. This could jeopardise "the security of future generations up to the end of the century," she said.

Mr Kohl and Mrs Thatcher were at pains to avoid a public quarrel over the issue, but made clear that their differences remained over the need to decide this year on replacing ageing 150km-range Lance missiles in the 1990s by new 450km-range weapons.

Yesterday they repeated the formula arrived at in the Nato summit in Brussels last year on the need to keep weapons systems "up to date where necessary". They agreed to meet again in end of April at Mr Kohl's home in Ludwigshafen to try to arrive at e compromise.

Although diplomats from both sides said they were optimistic that London and Bonn could eventually bridge divergences on the Lance successor question, finding a solution could prove a taxing task.

Mrs Thatcher stressed that she and Mr Kohl had found "an enormous measure of agreement" at their Frankfurt talks. But she underlined the need for "constancy and consistency" in maintaining "a firm defence".

This appeared a careful way of indicating opposition to West German wishes to delay the Lance decision. Bonn instead wants to start negotiating cuts in the short-range weapons in central Europe conceived as a particular threat to Germany.

Asked about West Germany's commitment to defence, Mr Kohl said Bonn needed "no instructions" from abroad in keeping up its guard against the Soviet Union.

The two leaders and ministers from both sides also discussed general prospects for Soviet reform policies, the expansion of the European community, and developments in southern Africa and the Middle East. Mrs Thatcher said Bonn and London both supported Mr Mikhail Gorbachev's reforms but would judge him "not by words, boldness and courage - however important they are - but by results."

Over monetary matters, Mrs Thatcher made clear her deep misgivings about any weakening of national political sovereignty which could result from a move towards European monetary union. So far Britain had done very well in staying outside the exchange rate mechanism of the European Monetary System, she said. Her opposition to full membership had not changed.

The Delors committee report now being drawn up would have to set out "with stark clarity" the consequences of EC countries giving up to a multinational body sovereignty over questions like interest rates or structural policies.

Berlin's SPD leader catapults into national prominence

By David Goodhart

UNTIL THREE weeks ago few people outside West Berlin had heard of Mr Walter Momper, leader of the city's Social Democratic Party (SPD), but for the next two years he will be one of West Germany's most important politicians.

The surprising upset for the Christian Democrats (CDU) in last month's Berlin election, partly due to the rise of the far-right Republicans, almost certainly means the city will now be run by a coalition of the SPD and the radical eco-socialists of the Alternative List (Berlin's name for the Greens).

Mr Momper, a conservative Social Democrat, does not especially like the idea of governing with the AL, and the US, UK and France who still formally occupy Berlin like it even less.

But talking in his office in the city hall this week, he said that despite difficult, and possibly unsuccessful, negotiations to come with the AL, "a deal with them is still the most likely form of government".

That is partly because there is such enthusiasm for a "red-green" coalition inside the Berlin SPD. Also the AL leadership, sniffing real power in Berlin, has been much more pragmatic than expected in talks with the SDP.

The city may no longer be the barometer of East-West tension that it once was, but it still has enough strategic and emblematic significance for Washington to view with anxiety the prospect of a radical government in an increasingly polarised Berlin.

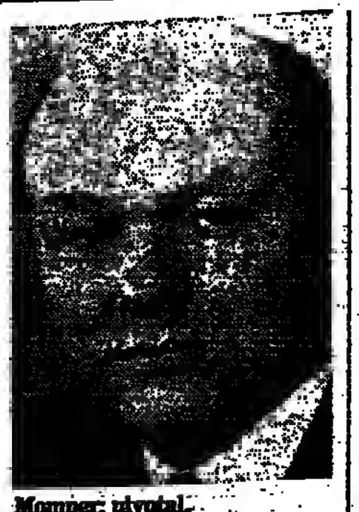
US officials are even more worried that a successful red-green coalition would significantly improve the SPD's chances of success in the 1990 national elections and might even pave the way to such a coalition in Bonn. Berliners like to point out that when the CDU displaced the SPD from city hall in 1981 a similar change followed in Bonn one year later.

Watertight

Mr Momper is well aware of his pivotal role in West Germany's newly-fluid politics. That is why he will take his time trying to establish a watertight coalition agreement with the AL that will prevent the "red-green chaos" the CDU hopes for.

The odds must be against a stable and successful coalition. Despite Mr Momper's assurances that he will not change broad outlines of the CDU's pro-business strategy, capital is more likely to flow out than in.

He will have trouble in addressing quickly the legitimate grievances of many working-class Republican voters and will have trouble from the police (a stronghold of Republican support).



Momper: pivotal

On top of that are the likely conflicts between the coalition and the Allies and between the ultra-democratic principles of the AL and the compromises of power.

Mr Momper, a 44-year-old former labour historian, is said to be growing in stature under the new pressure. But his two years as leader of the Berlin party, after giving up management of the Berlin Historical Commission, have not been happy ones. But for the unexpectedly sharp rise in the SPD's share of the vote last month, he would probably now be out of a job.

Significantly, there is not a trace of 1968 Berlin bohemia about him. He has spent much of his political life fighting the AL in Kreuzberg - Berlin's most strife-ridden district. He does, however, like to point out that he was chairman of the Kreuzberg SPD when the first SPD-AL district level coalition was formed.

Italians see obstacles to monetary union in EC

By John Wyles in Rome

THE unanimous support of Italian opinion leaders for European monetary union was highlighted yesterday when central bankers, industrialists, financiers and politicians argued that the single European market could not achieve its aims without steady progress towards monetary integration.

But there were also signs of sober realism about the obstacles, not least in Italy where deteriorating public finances are seen as a growing threat to full participation in greater monetary co-operation. Mr Lamberto Dini, deputy governor of the Bank of Italy, told a conference organised by the Italian section of the Association for the Monetary Union of Europe that free capital movement would necessitate more stable exchange rates.

This would require more co-ordination of monetary policies and, ideally, agreement within the EC on national budgetary balances and their financing. Although UK opposition to monetary integration drew frowns, several speakers dwelt on West German caution.

Mr Reiner Masera, director general of Imi, noted the need to reconcile the British model of self-regulating financial markets and the German approach of tighter official regulation. The German banks' large equity holdings in industry meant that Bonn wanted a guarantee of stability in any move towards monetary integration "because of the need to safeguard industry which is very dependent on the health of the financial sector," said Mr Giuliano Amato, Treasury Minister.

● Stephen Fidler adds: A single European currency is an essential component of a single European market and some sacrifice of national sovereignty would be unavoidable to achieve it, Mr Alfred Herrhausen, chief executive of Deutsche Bank said in London.

This would require a politically independent European central bank, committed by statute to preserving price stability.

He told a combined meeting of the American and German Chambers of Commerce that such the bank "would have to accept a commitment to general objectives of the Community as a whole."

"The establishment of the appropriate institutions should not be delayed until economic and fiscal policy was fully harmonised.

Ethnic tensions heightened by plan to raise Estonian flag

By Quentin Peel in Moscow

A PLAN to hoist the blue, black and white-striped national flag of Estonia instead of the Soviet red flag from the battlements of government buildings on Friday has sparked renewed tension between native Estonians and Russian-speakers in the tiny Baltic republic of the USSR.

A two-hour general strike has been called for today by the Inter-Movement, a group of Russian-speakers, to protest against the replacement of the Soviet flag, and the decision by the Estonian Government to celebrate January 24 as a holiday to commemorate national independence in 1918.

The leaders of the movement, set up to counter the revival of Estonian nationalism represented by the republic's Popular Front for Perestroika, have also called on their members to picket the government buildings in Tallinn on Friday to prevent the flag being raised on Tall Hermann tower above the city.

The threatened backlash has caused heartsearching in the Estonian government, which had already decided to declare Friday a republican holiday. A meeting to discuss how the flag should be raised was abandoned without a decision on Monday, and will be resumed today.

Whatever their decision, the first legal celebration of independence - always described as a "bourgeois dictatorship" by official Soviet publications - seem certain to bring tens of thousands on to the streets of Tallinn.

It follows another massive demonstration of nationalist sentiment in the neighbouring Baltic republic of Lithuania last week, when an estimated crowd of 200,000 gathered in the town of Kaunas, the former capital of independent Lithuania, to mark their independence day.

Ethnic relations in Estonia are worse than in Lithuania, mainly because there is a higher proportion of Russians in the republic. Some 40 per cent of the 1.5m population is Russian speaking, as a result of heavy immigration since 1940 when the Red Army re-established Soviet rule.

Havel given nine months in prison

By Leslie Colitt in Prague

MR VACLAV HAVEL, the prominent Czechoslovak playwright and dissenter, was sentenced yesterday to nine months in prison.

He was found guilty of instigating a banned demonstration in Prague last month and obstructing the police while he tried to place flowers at a statue of St Wenceslas.

Havel: lawyer will appeal.

The verdict, which was expected to anger the West, followed Eastern Europe's first important political trial since the conclusion last month in Vienna of the European security conference in which member nations promised to respect human rights.

The state prosecutor had called for a one-year prison term. Mr Havel's lawyer said he would appeal.

Seven other opposition members also went on trial at another court accused of "hooliganism", but were not sentenced yesterday.

The authorities said 53 people arrested after the mass demonstrations in Prague would be put on trial.

Mr Havel, who is a co-founder of the Charter 77 human rights movement, said in his defence speech that in his lifetime only three Czechoslovaks had been found guilty of being "anti-socialist": Rudolf Slansky, Alexander Dubcek and Gustav Husak.

The first was executed as an alleged Western spy, the second deposed after the Soviet-led invasion of 1968 and the last, who served in a Stalinist prison in the 1950s, is Czechoslovakia's President.

"A fourth has joined their ranks, Charter 77."

An ashen-faced Mr Havel held his head high and smiled thinly as he was rushed past cheering supporters outside the courtroom by two uniformed guards.

"Long live Havel, free Havel," tha crowd, which included many young people, chanted each time they saw him.

Shoddy work 'led to quake toll'

By Quentin Peel

A TOP Soviet official has confirmed for the first time that shoddy construction was a prime factor behind the huge death toll in the December earthquake in Armenia.

The disaster claimed at least 25,000 lives, and left more than 500,000 homeless, as modern blocks of mass-produced flats collapsed into rubble.

Total cost of the tragedy is now estimated at some Roubles 10bn (£9.1bn), with more than one in 10 homes in Armenia destroyed.

The admission of shoddy construction, already identified by the Soviet press as an important cause of the toll, was made by Colonel-General K. Vertelov, deputy head of the state commission for quality control of design and housing construction.

His experts examined in detail a standard frame-panelled nine-storey apartment block in Leninakan, the largest city devastated by the earthquake, built in 1978. "The examination raised the question: how did the building manage not to collapse in the course of construction?" he said.

The building showed crude violations of building regulations, with more than half the concrete ceiling slabs "unsuitable for an earthquake risk area". The quality of the welding work "leaves much to be desired".

He warned that even in the huge reconstruction effort, building regulations are being ignored. An eight-floor hotel in Dilizhan, already 70 per cent completed, had been discovered to have "crude violations of the rules and regulations for seismic construction".

Single European traffic control body is aim of airline study

By William Dawkins in Brussels

EUROPE'S TOP airlines are to study how to set up a single air traffic control body to replace the complex and severely strained web of systems which now manage the region's crowded airspace.

In the meantime, the chaos that stranded thousands of holidaymakers in airports across Europe last year will inevitably worsen, warned Mr Karl-Heinz Neumeister, secretary-general of the Association of European Airlines (AEA), which launched the inquiry yesterday.

The association added that European Community efforts to liberalise air transport might have little or no effect without a far-reaching reform of air traffic control.

Nearly one in five European flights was delayed for more than 15 minutes last year, according to a report by the 21-airline association, well up from 15 per cent in 1987 and 12.5 per cent in 1986.

Some 70 per cent of those delays were caused by shortcomings in air traffic control, said the AEA. In total, 150,000 hours of flying time were lost through delays last year, the annual workload of 60 aircraft, equivalent to the entire fleet of Alitalia or Swissair.

The association dismisses current attempts to improve co-ordination between the 42 air traffic control centres covering Europe as well-intentioned but purely short-term, and calls for a wholesale reorganisation of the 22 different systems they use into one central system. In the US, 20 centres operate a single system for an area nearly double the size of Europe.

AEA airlines are already trying to reduce delays by rescheduling and acquiring more reserve aircraft, involving an investment this year of $200m-$300m. "But there are no signs that the situation will be better this summer or in 1990," said Mr Neumeister.

The AEA attributes the delays partly to the fact that Eurocontrol, a body set up in 1960 to organise European air traffic services, has been given inadequate power. It adds among other complaints that too much airspace is reserved for military use; air traffic control planners have hugely underestimated the increase in flights; and that joint standards for equipment and procedures are crippling co-operation efforts.

Poor industrial relations and too few controllers also contribute, says the report. It calls on EC institutions and Governments to provide political leadership for such a reorganisation.

Air Traffic Control in Europe, from AEA Secretariat, Avenue Louise 350, B-1050, Brussels, Belgium.

Tighter credit squeeze looms in Spain

By Peter Bruce in Madrid

THE SPANISH Government might have to augment its credit squeeze following a one point rise in inflation in January, Mr Mariano Rubio, the Governor of the Bank of Spain, warned yesterday.

Speaking to a parliamentary committee, he said that "an explosion in inflation would make it necessary to adopt stabilizing measures quickly" to stop further price increases. Making it clear that the Bank was considering further monetary measures, he said a new package would have serious consequences for joh creation.

The Government has heen shocked hy January's price increases - it has forecast 3 per cent inflation for the whole year. New figures also show that the hroad money supply measure increased soma 14 per cent in January, well above its targeted limit, and that private and public credit grew 22 per cent and some 12 per cent respectively.

Greek Communists look to form broad left coalition

By Andriana Ierodiaconou in Athens

GREEK OPPOSITION Communists, looking forward to a boost in their strength in the general election next June, have begun to woo elements within the ruling Socialist party (Pasok) for the possible formation of a broad left-wing coalition Government after the vote.

"With whom do you want to co-operate, left-wing and democratic members of Pasok? With conservatism or with the left and progress?" Mr Leonidas Kyrkos, leader of the small Greek Eurocommunist party (EAR), said in speech on Monday night. He was speaking at the first mass rally of the electoral alliance formed last autumn between EAR and the pro-Moscow Communist Party of Greece (KKE).

The Eurocommunists won 1.8 per cent of the vote and the KKE 9.9 per cent in the 1985 election. In joining forces this time the two parties hope to achieve a score greater than the sum of their parts, by attracting left-wing voters disaffected with Pasok who are currently registering as undecided in the polls.

The Socialists' popularity has plunged in recent months as a result of the Koskotas banking scandal, and the ill-health and extramarital relationship with a much younger woman of Mr Andreas Papandreou, the Prime Minister.

While the conservative New Democracy party is expected to come first next June it is not sure of a parliamentary majority. Failure to do so would open the way for a coalition government, either hetween the Communists and Pasok radicals or New Democracy and Pasok moderates.

The Communists at present rule out co-operation with Pasok under Mr Papandreou's leadership. The Premier is blamed for the climate of corruption in the public sector and a post-1985 conservative shift in economic and foreign policy.

Road-rail bridge for Sweden and Denmark backed

By Robert Taylor in Stockholm

A PROPOSAL for a road-rail bridge linking Sweden with Denmark was recommended yesterday on economic and transport grounds by a joint committee from the two countries. However, a rail-only tunnel is regarded as the best environmental solution.

The joint study calculates that a 17.6km long road-rail bridge from Malmo to Kastrup in Denmark would cost SKr11bn (£1bn) with the rail part accounting for SKr5.75bn, while a rail tunnel alone would be SKr8.25bn (all at 1988 prices). A third alternative would involve building a rail bridge which would eventually be expanded to take cars.

The delegation has not come down firmly for any proposal but do appear to lean towards a rail-road solution despite the protests this is likely to arouse among environmentalists.

Setback for Hoechst in challenge to EC powers

By William Dawkins in Brussels

HOECHST, the West German chemicals multinational, yesterday suffered a serious setback to its challenge to the cartel-busting powers of the European Commission.

Mr Jean Mischo, senior advocate general at the European Court of Justice, recommended that an appeal by Hoechst *against the Commission's right* to stage a dawn raid at the company's headquarters be dismissed. He refused to accept Hoechst's complaint that the Commission had infringed its basic rights hy demanding entry to its Frankfurt office in search of evidence of an illicit price and production fixing cartel in PVC and polyethylene, two widely used plastics.

The judges are expected to deliver a final ruling this summer. They rarely stray from the advocate general's preliminary opinion. Hoechst had refused to admit the Commission inspectors during the inquiry, which began in 1987 and ended last year with the imposition of a record Ecu 60m (£38m) fine on 23 top petrochemical producers.

This is the first time any company has questioned the Commission's power to demand information on suspected *cartels*, as opposed to the validity of data gathered in such raids. If the court follows Mr Mischo's opinion, this would strengthen Brussels' powers to crack down on anti-competitive agreements in all industries, said a Commission official.

Hoechst, which was fined Ecu 2.5m for participating in the cartel, is also appealing against an Ecu 55,000 fine imposed for locking Commission inspectors ont of its officee. It was eventually forced to let them in by a West German district court.

Yugoslav paper bows to pressure over Rushdie

By Judy Dempsey in Vienna

YUGOSLAVIA'S newspapers yesterday bowed to pressure from the authorities who effectively banned the serialisation of Salman Rushdie's book The Satanic Verses for the duration of the visit to the country by President Ali Khamenei of Iran.

A journalist from Borba, the Communist party newspaper which began serialising the book on Monday said yesterday: "We had a quarrel with some senior officials, and well, it was decided to halt tha series until later in the week when Khamenei has left the country." He added the timing of the serialisation might have been a "bit clumsy."

President Khamenei, who is accompanied by Mr Ali Velayati, the Iranian Foreign Minister, arrived today in Sarajevo, Bosnia, tha centre of Yngoslavia's 4m-strong Moslem community on the second of a three-day official visit.

He met leaders of the Moslem community, who belong to the Sunni sect, visited an Islamic centre and held talks with local politicians. On his return to Belgrade, he will meet economists and politicians with the aim of seeking greater co-operation in rebuilding Iran's war-shattered economy.

The Iranian entourage arrives in the Romanian capital, Bucharest later today where it is understood that there are no plans, at least in the forseeable future, to translate The Satanic Verses into Romanian.

A country ramble lifts the tedium for Sweden's jail 'clients'

Sara Webb takes a stroll through a prison system where the stress is less on punishment than on preparing for freedom

A GROUP of prisoners in a top-security Swedish jail were recently shown a television documentary about life in a British prison. They were so appalled hy tha hrutality and organised gangs that tbey refused to watch the whole thing.

Most Swedish jails would put a British students' hall of residence to shame. They don't smell, are cleaned by paid staff rather tban by tbe inmates, and a visitor may be a little baffled as to which of the jean-clad men in the corridors are warders and which prisoners, or "clients", as they are often referred to.

A Swedisb journalist friend used to joke that the only way he would ever find time to write his book would be to commit a crime so he could spend s few years in the peace and quiet of tbe clink.

His everyday needs would be catered for in either a room of his own or a self-contained apartment shared with four inmates, plants, a TV, radio, stereo (up to three pieces of electrical equipment are allowed) and the option of taking occasional holidays with his family in the Swedish prison hoard'a holiday camp near Gaevle.

Sweden claims to be the only country with a holiday centre for long-term prisoners, with saunas, communal games centre and a barbecue hut. The little village of Gruvberget was once home to forest labourers who worked on the surrounding land. There is no surrounding fence and prisoners are free to go for walks in the forests up to 10 miles away.

Of course, Gruvberget is immensely popular. Mr Rolf Jobansson, the head warder, can only accept 1,100 of the 2,500 applications each year. Prisoners stay for one or two weeks, and exemplary clients are allowed to come three or four times a year.

Gruvberget's alumni include Sweden's sauna murderer (who

European Diary

Sweden

locked his wife in a sauna and turned the heat up until she cooked) and Miro Baresic, the Croatian terrorist who killed the Yugoslavian ambassador to Stockholm in 1971. The majority are drug offenders (maximum sentence 12 years) or have committed violent crimes, although no prison warder is supposed to divulge someone's crime as this would constitute a hreach of trust.

The week I visited was described in the holiday camp brochure as winter aports week. The prisoners had cross-country skiing lessons during the daytime, and then piled into a bus at 4 o'clock to drive to a nearby mountain for floodlit slalom skiing.

"We like clients to learn basic skills like cookery and dancing," said Mr Johansson. Ballroom dancing apparently is one of the most popular courses, though the eight-hour day is filled out with keep fit classes. The emphasis on keeping fit in Swedish prisons means most of the men look like a cross between Schwarzenegger and the Green Giant.

The aim is to help prisoners use their spare time effectively "because that is where they can get into trouble when they are free", says Mr Johansson. So nature rambles, bicycling, canoeing, rowing, and salmon fishing in the surrounding lakes are encouraged - bnt not hunting, even though there is plenty of game in the area. The house rules are no weapons, drugs or alcohol, though the occasional bottle has been known to turn up in the grounds once the snow has melted.

There are also a lot of religious courses. "Christianity is especially popular with those who have killed as they start to think about the meaning of life," says Mr Johansson.

The essence of the Swedish prison system is not to punish people but to help them overcome their difficulties and prepare for a more rewarding life once they get out of jail. The importance of keeping the family together is stressed and well-behaved prisoners are allowed furloughs every other month plus the opportunity to stay with their families at Gruvberget in relatively normal circumstances.

The National Prison Board says that deprivation of liberty should be avoided whenever possible as it seldom improves an individnal's chances of adjusting to life outside. It is also cheaper to keep people in non-institutional surroundings.

The average cost per prisoner per day in a closed national prison is SKr1,121 with staff salaries accounting for a large proportion of that figure. At Gruvberget it costs about SKr150-200.

Prisoners receive free food and travel expenses plus SKr300 a week in pocket money. Some prisons are experimenting with a system whereby inmates receive the market rate for working which helps them to pay off their debts to the state (for example paying back the money they made on drugs dealing) and improve their finances before release so that there is less temptation to return to crime.

The board claims the recidivism rate is about 60 per cent (Britain's, by comparison, is about 55 per cent) although there has been more success with special projects such as the showcase prison at Oesterake for drug offenders.

Mr Johansson is choosy. "I've only known 10 problem cases in four years here. There aren't very many escapes - most prisoners would have had the chance on the train up here when they travel unaccompanied. Anyway, the prisoners know they have too much to lose like the right to furloughs and to see their families if they misbehave."

Of the 42,243 furloughs granted in 1987/88, 4 per cent were abused. Altogether there were 1,127 escapes from jail in a country with an average prison population of 3,413 and where about 15,000 people are sentenced each year.

In 1987 Stig Bergling, a convicted spy, walked away during a weekend visit to his wife in 1987 and has not been seen again. The incident led to the resignation of the justice minister and an attempt to clamp down on furloughs.

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Thrifts bail-out will cost $126bn says Darman

By Lionel Barber in Washington

THE US government rescue of savings and loan institutions, or thrifts, is expected to cost $126.2bn over the next 10 years, Mr Richard Darman, the budget director, said yesterday.

In his most explicit statement to date, Mr Darman told the Senate budget committee that the net cost of the bail-out to tax payers would be $39.9bn. The balance would be met by the S&L industry and $50bn of bond sales.

Mr Darman – in his first Congressional appearance since President Bush presented his fiscal 1990 budget – came under fire from Democrats who accused the Administration of failing to provide adequate detail on its spending plans. One Democrat senator called it a "phantom budget".

Mr Darman faced criticism when he repeated earlier estimates that tha Government would only spend $1.9bn on thrift rescues in fiscal 1990. In this fiscal year, the Administration intends to spend $11.1bn, and snch "front-end loading" has enabled it to skirt the Gramm Rudman-Hollings budget reduction law targets and give itself more flexibility next year.

Mr Darman countered accusations of accounting trickery by informing the committee that he had sent 500 additional pages of information on Mr Bush's budget proposals, and he repeated an invitation to sit down and negotiate.

Earlier, Mr Bush met Congressional leaders to get budget talks off the ground. But Congressman Leon Panetta, tha House budget chairman, said after the hour-long session that "tough choices" were still missing. Other Democrats said the meeting did not discuss detail, only "process".

One of the main difficulties surrounds the Administration's proposal for a "flexible freeze": defence spending would be frozen in real, inflation-adjusted terms, while other social programmes would either be held to their current nominal levels or raised slightly – with the Democrats asked to share in the setting of priorities.

Mr Darman warned Democrats that to cut the 1990 deficit to $100bn certain programmes "must not be assumed to be immortal".

He also defended the Administration's economic growth projection of about 3.25 per cent, noting that since 1948 real growth in the US economy has averaged 3.25 per cent in a period that included eight recessions.

Alfonsín moves to placate Argentine exporters

By Gary Mead in Buenos Aires

THE Argentine Government yesterday announced further economic measures aimed at helping it limp through to elections in May with the continued support of industrialists.

The Radical Party Government said it would continue three exchange rates – the "commercial", "special" and "free". The commercial and special rates would be devalued next month by 8 per cent on top of the 6 per cent devaluation this month. Public sector prices would increase 8 per cent next month on top of a 6.5 per cent rise this month.

Three days of negotiations followed anger in the agriculture and industry export sectors where it was felt the economic package announced earlier this month failed to address the problem of the local currency, the austral, being overvalued by as much as 35 per cent against the dollar in recent weeks.

Representatives of the two sectors yesterday accepted a package which improves their earnings by allowing them to transact a greater percentage of their exports through the free-floating exchange rate. That rate yesterday hovered around 25 australs to the dollar, almost 80 per cent more than the lowest – or "commercial" – rate of exchange. The "special" rate is pegged at 25 per cent above the "commercial".

Farmers are now permitted to transact 20 per cent of exports in the free-floating exchange rate, the remaining 80 per cent via the "commercial". For manufactured exports, 20 per cent could be exported at the free-floating rate, 30 per cent at the "special" and 50 per cent the "commercial". This alteration implies a devaluation of almost 14 per cent for industrial exports and 15.7 per cent for agricultural prodnct exports.

The Government also promised to introduce a sliding scale for both sectors, whereby an increasing volume of their exports would gradually be permitted to be transacted at the free-floating rate. By November all Argentine exports would be handled through a free-floating exchange rate.

Until February 7 this year the agricultural sector was compelled to transact all exports at the "commercial" rate. For every US dollar earned by the sector it received roughly 30 per cent fewer australs than a free exchange market would have brought. Government pocketed the margin to alleviate a chronic fiscal deficit problem.

Industrialists fared better, as the Government last August managed to achieve a price-restraint agreement with its more influential spokesmen. That agreement, aimed at keeping inflation below the symbolically-alarming 10 per cent monthly barrier, was bought by government at a price – permission for a greater volume of exports via higher exchange rates than that granted to farmers.

The question is whether the margin of economic stability now achieved will last long enough to improve the prospects for the Radicals – lagging 10 per cent in opinion polls – for May 14.

Unified exchange rates in November is a tasty carrot to industry, perhaps compensating for the Government's economic policies to date. The stick waved by President Alfonsín is the spectre of the return of Peronist government and its likely economic effect – increased government intervention.

Indian warriors conduct a ritual public relations exercise

A DRAMATIC face-to-faca confrontation between a club-waving Indian warrior and an executive of Electronorte, the Brazilian electricity utility, brought the passionate conflict over a big Amazon dam project vividly to life yesterday, writes Ivo Dawnay in Altamira.

The incident came in front of 2,500 tribesmen, ecologists and onlookers in a community hall in Altamira, in Pará state, a few miles from the proposed 11,000MW dam site threatening the Caiapó tribe's homeland.

Observers unfamiliar with Indian etiquette thought for a moment that this unprecedented multi-tribal protest meeting might end in a bloodbath.

Mr José Antonio Muñoz Lopez, Electronorte's planning director, had just begun a somewhat plodding defence of the project when an older warrior called Pauva-Ko leapt to his feet, charged the platform and wielded his club close to the executive's face.

In a speech, later translated, he shouted: "We don't understand this energy. We live off the food of the forest. You want to build this dam, but you didn't consult us. "I refuse to accept it."

Seconds later, Tol-a, a bare-breasted tribeswoman armed with a machete, rushed forward, slashing the air inches from the director's cheeks. "You are telling a story worth nothing," she screeched. "You do only what interests you."

The protests sent a surge of excitement through the crowded hall, with some of the braver cameramen charging forward while others recoiled. Mr Muñoz, to his credit, kept icy cool.

It was left to Chief Paulo Paiakan, whose worldwide campaign has turned the five-day pow-wow into an international media event, to calm nerves and tempers. The threatened violence was only ritualistic, be explained, to the disappointment of some, but the relief of many.

From then on, the conference, punctuated by war dances, whoops and chants, went tha organisers' way. With an articulateness and emotion unattainable by even the finest public relations companies, Indian after Indian steadily undermined Electronorte's case in a series of impassioned and dignified speeches.

All Mr Muñoz's assurances that the dam project would be limited in its effects were greeted with resonating bowls of disbelief and the rattling of arrows by the warriors who were bedecked with feathers and warpaint.

"Any decision to flood Indian lands now has to be approved by Congress, he concluded. There was a prolonged, indescribably sceptical "Wooooooo".

In particular, the Caiapó were incensed over the decision to give the dam the Indian name of Cararao. A corpulent warrior, called Colonel Pondo, wearing a head-dress that looked like a feather duster, graphically revealed that this name was, in fact, a war cry, signifying, with embarrassing appropriateness "death and destruction".

But the most moving speech came not from a Caiapó but a Xavante chief. "We have not come to hear abont new studies; we want the project cancelled here and now," be said. "We are the real Brazilians and we have been here for centuries and centuries. You must learn to respect us."

That argument may yet be ignored but yesterday, for Mr Muñoz as much as for those of us clearing the lumps from our throats, it was a lesson well learned.

Bush says allegations against Tower disproved

By Lionel Barber

PRESIDENT Bush yesterday gave a ringing endorsement to Mr John Tower, his controversial choice to be US Secretary of Defence.

"The allegations against him simply have been gunned down," Mr Bush said after receiving a 140-page FBI report. His comments are part of a solid campaign by the White House to secure Mr Tower's nomination by the Senate Armed Services Committee.

Members of the committee received the document yesterday and Senator Sam Nunn, the Democrat chairman, intends to hold a vote on the nominee later this week.

Mr Nunn's vote could prove decisive and the White House has been waiting, so far without luck, for a softening of the senator's position. But Mr Nunn has left himself enough room to swing behind Mr Tower, a former Republican senator from Texas.

The FBI report includes an examination of Mr Tower's life in Dallas, Texas, including interviews with neighbours, maids, and liquor store owners. It apparently concludes that Mr Tower, who served for 24 years in the Senate, latterly as armed services chairman, drank excessively in the 1970s but has curbed the habit.

Mexican debt team on European visit

By Robert Graham

MR Pedro Aspe, the Mexican Finance Minister, arrives in London today as part of a five-day visit to European financial centres to set out the debt strategy of the administration of President Carlos Salinas de Gortari.

The Mexican Government is understood to be seeking a credit arrangement to cover the entire six-year-term of President Salinas, who took office last December. No figure has been mentioned but in Mexico City reports suggest the Government is looking for about $7bn a year.

Mr Aspe is accompanied by Mr Angel Gurria, Under-Secretary for International Finance, and Mr Miguel Mancera, governor of the central bank, two key figures in previous negotiations on Mexico's $107bn foreign debt.

HK Basic Law draft approved in Peking

By John Elliott in Hong Kong

A SECOND draft of the Basic Law – or mini constitution – which will govern Hong Kong when it reverts to Chinese sovereignty in 1997 was approved yesterday by a standing committee of China's National Peoples Congress in Peking.

The plans will cause considerable controversy in Hong Kong where there are divided views over the speed of the introduction of democracy, including universal suffrage for the election of a Legislative Council and chief executive who will run the region after 1997.

The draft proposes a programme which is far too slow for liberal campaigners in Hong Kong because universal suffrage would not be introduced before the year 2012 at the earliest.

The draft is expected to be published in both Peking and Hong Kong within a few days, possibly next Monday, and will then be the subject of five months intensive consultation lasting till the end of July. Later it will be prepared in its final form for promulgation by the Peoples Congress early next year.

No changes have been made by the standing committee to the draft, which was drawn up by a committee comprising representatives of China and leading people from Hong Kong. But three members of the 123-member committee either voted against the draft or abstained yesterday.

Details of the coming months' consultations will be worked out within the next few weeks, including a possible public opinion poll on Hong Kong's new political system.

Shevardnadze discusses peace policy

By Tony Walker in Cairo

MR Eduard Shevardnadze, the Soviet Foreign Minister, held further discussions yesterday with Egyptian officials on ways of overcoming Israel's opposition to an international peace conference.

Mr Shevardnadze, who will meet Mr Moshe Arens, his Israeli counterpart today, focused in his talks with the Egyptians on procedures that would help facilitate the beginning of peace talks and deal with Israel's refusal to negotiate with the Palestine Liberation Organisation.

This refusal, allied with an unwillingness by the Likud bloc in Israel's coalition to countenance territorial compromise in the occupied West Bank and Gaza, is the main obstacle to a resumption of a genuine peace process.

Moscow is trying to find a formula that would help overcome Israel's objections to joining a peace initiative under UN auspices.

In Damascus on Saturday, Mr Shevardnadze unveiled a three-point plan that called for the establishment of a UN Security Council-sponsored preparatory committee to help organise an international conference within nine months attended by all parties to the dispute, including the PLO.

MR Eduard Shevardnadze, the Soviet Foreign Minister, at the pyramids near Cairo yesterday

Egyptian officials say that arriving at a mechanism that would entice the Israelis into serious negotiations is a preoccupation of this week's discussions.

But they also recognise that little progress can be expected until the US lends its weight to the process.

Mr Arens made it clear both before and after his arrival in Cairo that Israel was not about to drop its longstanding refusal to deal with the PLO which it describes as a terrorist organisation. Abandonment of this position would require an almost convulsive political change in Israel.

Mr Shevardnadze will also meet Mr Yassir Arafat, Chairman of the PLO in Cairo today several hours after his talks with Mr Arens. Both meetings will take place at the Soviet embassy.

This will be the highest level meeting between the PLO and the Soviet Union since Mr Arafat proclaimed an independent Palestinian state last November.

Shamir hard line may sour trip to Paris

By Andrew Whitley in Jerusalem

ISRAEL'S unbending opposition to the Palestine Liberation Organisation, and to the holding of an international conference on the Arab/Israeli dispute, seems likely to sour the atmosphere of a three-day visit to France by Mr Yitzhak Shamir, the Israeli Prime Minister.

Returning yesterday to Paris, where he lived for many years as the European chief of the Mossad intelligence agency, Mr Shamir acknowledged that the subject of France's blossoming relations with the PLO was bound to come up in his talks.

The Israeli leader, on his first official trip abroad since being reappointed in December as head of the coalition government, met Mr Michel Rocard, the French Prime Minister, yesterday and is scheduled to meet President François Mitterrand today.

In a downbeat assessment of prospects for the trip, before leaving Tel Aviv Mr Shamir said he would "try to get a certain convergence of views about prospects for peace". He did not hold out any hopes of convincing President Mitterrand to abandon a proposed meeting with Mr Yassir Arafat, the PLO leader.

Condemning Mr Arafat as a liar, the right-wing Israeli Prime Minister described the PLO to the French daily Le Figaro as "a very big obstacle to peace".

Mr Shamir told Le Figaro: "I would be happy if the French president avoided taking this step.

"All attempts by Europe or any ... nation in the world to reinforce the prestige and importance of Arafat and the PLO are detrimental to the cause of peace," he said.

French officials have said they are examining the possibility of an encounter between President Mitterrand and Mr Arafat "in a neutral country".

Israeli diplomatic efforts are currently aimed at blunting the international perception that the Jewish state is itself becoming an obstacle to the opening of peace negotiations.

To that end, new formulas aimed at skirting the proposed international conference have been aired in meetings in Cairo, London and, now, Paris.

Canberra's air policy heads for a spell of turbulence

Australia's air services are long overdue for a shake-up, argues Chris Sherwell

PITY the unfortunate air traveller in Australia. Things could hardly get worse than they have this week.

On Monday all flights were grounded through a lightning strike by the nation's pilots. Unhappy about their pay prospects, they decided against following the customary route of conciliation and arbitration and stopped work. Disgusted passengers shortened their holidays, rearranged business trips and quietly fumed.

Yesterday chaos returned. Air traffic controllers at Sydney airport, demoralised by their conditions of work, decided not to work overtime. The result was that only a few aircraft could land or take off each hour. Flights all over the country were badly delayed or cancelled.

Even in "normal" weeks, passengers have good cause to be irritated – Australia's "two airline policy" sees to that. The policy fixes fares on the two domestic carriers, and at an extravagant level, so that, regardless of the airline, it costs close to A$1,000 (£460) for a return flight from Sydney to Perth, and A$200 return to nearby Canberra.

Incredibly, these fares have risen as the price of aviation fuel has fallen. They mean Australians find it more difficult to see their own country than foreigners who use cheap stopovers on Qantas – an airline which Australians can only use when flying abroad.

High fares also produce handsome profits. The state-owned Australian Airlines last week reported a 23 per cent jump in interim earnings. Ansett, jointly owned by Sir Peter Abeles' TNT group and Mr Rupert Murdoch's News Corporation, does not publish figures, but recent comments from both companies in their interim results confirmed the airline's importance to them.

The "two airline policy" also makes for odd scheduling. Australian and Ansett often fly at identical times between two locations, yet on the busiest Melbourne-Sydney route there is no shared shuttle. Worse, they do not fly when you might expect: the last flight to Sydney out of Canberra, the nation's capital, is at the late hour of 7.20pm.

Fortunately, the policy is soon to end. But it is far from clear what exactly is to replace it. As an issue affecting the flying public, however, it has been overtaken by the problems of Sydney airport.

The biggest difficulty is that Sydney's radar system is inadequate and congestion is growing to frightening levels. The air traffic controllers say they cannot do their job properly, and it is now a routine expectation that flights will neither leave nor land on time. The problems are compounded by a night-time curfew, which creates a morning rush of international flights.

The terminals can be just as bad. The only "mass" transport system in Sydney is a bus service. Businessmen who use taxis to get into town must expect to wait in an inefficient queueing system, and to share cabs with other passengers without any fare discount.

At the international terminal, check-in arrangements are lamentable for those departing. For those arriving, especially in the morning, exasperating hold-ups at customs and immigration are the norm. Fortunately, this too will change with expansion of the building and its facilities.

Public debate has now focused on the question of whether to build a third runway at Sydney or a new airport at a remote site known as Badgery's Creek. Looking at the abject failure to deal with Sydney's problems – at enormous cost to its image and to the country's tourism prospects – it is scarcely imaginable that a debate is necessary.

But that is not to reckon with the politicians, who have put off deciding the issue for more than a decade. The Labor party federal government, with key members holding seats in airport-affected constituencies, appears determined not to build a third runway, and is marshalling formidable, populist arguments against it.

The Sydney business community, egged on by the Liberal state government, has begun organising itself in response, ridiculing a government claim that a functioning international airport could be built within three years at the proposed new site, and warning of the costs in tourism and declining safety standards. It is a battle which will not be decided quickly.

Kabul regime shows arms find

By Our Foreign Staff

THE Afghan Government displayed a huge cache of arms and explosive devices it says the Moslem rebels had planned to use to attack buildings and city bazaars in Kabul yesterday, the ninth anniversary of a big protest against the Soviet-backed government in the capital.

Afghan Foreign Ministry officials took journalists to the headquarters of Khad, the Soviet-style secret police, where they produced a collection of weapons, grenades, rockets and electronic circuit testers with markings indicating they were from the US, Britain, Egypt, Sweden, China and Italy. Officials said the unmarked weapons and devices were made in Pakistan which supports the Mujahideen resistance fighters.

About 250kg of explosives was found with the weapons in a well in the east of Kabul, a Khad spokesman said. He added that three men had been arrested and had confessed to being guerrillas of the group led from Pakistan by Mr Gulbuddin Hekmatyar, one of the most extreme fundamentalist leaders.

Four rockets were fired at Kabul yesterday killing one person but the city was otherwise generally quiet and soldiers could be seen relaxing on their armoured personnel carriers in the bright winter sunshine.

The protests on February 21, 1980, less than two months after the Soviet military invasion of Afghanistan began with people shouting the Moslem slogan "Allah-o-Akhbar" (God is great) from the rooftops and the streets. Security forces opened fire. Reports of the total death toll varied, but diplomats said it was at least several dozen.

The city of 2.5m had been awaiting the anniversary yesterday with some trepidation amid rumours that the resistance was planning to mark the day with a spectacular attack. The bazaars were noticeably quieter than usual and some shops were closed.

In Islamabad, the Pakistani capital, Afghan rebels tried a new tack to overcome their divisions on the composition of an interim government to replace the Soviet-backed regime of President Najibullah in Kabul.

After 10 days of a *shura*, or religious consultative council, marked by quarrels and walkouts, the seven Mujahideen parties based in Pakistan set up a committee of 14 to work to draw up a list of ministers.

Kampuchea talks end in failure

A SECOND round of multilateral peace talks on Kampuchea ended without any new agreements yesterday after negotiators failed to bridge major differences among the warring factions, AP reports from Jakarta. Indonesian Foreign Minister Ali Alatas, who organised the three days of talks at a Jakarta hotel, said further discussions would be needed.

A "consensus statement" cited differences among the four factions, notably on the establishment of an interim quadri-partite authority of national reconciliation under Prince Norodom Sihanouk.

Jordan to reschedule

Jordan, hit by a shortage of foreign exchange, is seeking to reschedule some of its $6bn foreign debt, Mr Zeid al-Rifa'i, the Prime Minister said, Reuter reports from Amman.

Mr Rifa'i said Jordan's foreign debt was just under $6bn, with service payments of about $900m a year. A World Bank team is in Amman arranging a structural adjustment loan.

Bribe claim dropped

A former Philippine cabinet minister yesterday withdrew allegations that Mitsui and Nissho-Iwai, two Japanese companies, paid kickbacks to win road construction contracts, Richard Gourlay reports from Manila. The claims were made in civil proceedings against former Philippine president, Mr Ferdinand Marcos.

Last week Mr Balthazar Aquino, a former Public Works and Highways Minister – no relation to President Corazon Aquino – also withdrew his allegations against C. Itoh and Marubeni.

Malaysian accord

Malaysia's former Deputy Prime Minister, Musa Hitam, yesterday applied to rejoin Malaysia's ruling New United Malays National Organisation (UMNO) party yesterday, AP-DJ reports from Kuala Lumpur. The move heals a major rift between him and Dr Mahathir Mohamad, the Prime Minister.

US anxious as Moscow revives shuttle diplomacy

Tony Walker examines the significance of the Soviet initiative in the Middle East

"MR Shevardnadze," observed an Egyptian official who was involved in the Camp David process, "is engaging in shuttle diplomacy like the Americans."

The comparison, though not exact, is a concern for the US. The Soviet Foreign Minister's highly visible Middle East tour certainly adds to pressures on the White House to quicken its review of its Middle East options. But Mr George Bush, US president, underlined yesterday that the US that would not be "stampeded" into hasty initiatives in reaction to the increased Soviet activity in the region.

The parallels with Washington's shuttle diplomacy of the *1960s and 1970s should perhaps* not be exaggerated, but it is a measure of the changes that have occurred in the conduct of Soviet foreign policy that Mr Shevardnadze is able to range freely in a region that would have treated such a mission with great suspicion until very recently.

The Shevardnadze mission, coming within days of the Soviet withdrawal from Afghanistan and as the new US administration is still groping for a Middle East policy, has helped project the Soviet Union to the centre of diplomatic efforts in the region.

The Soviet official's proposed meetings in Cairo today with Mr Moshe Arens, Israel's Foreign Minister, and Mr Yassir Arafat, leader of the Palestine Liberation Organisation, have added an unexpected and welcome dimension to his mission. At the very least it reveals a seriousness of purpose on the part of the Soviets and a willingness to canvass all points of view.

US officials say they have long recognised that the Soviet Union has legitimate interests in the Middle East. They believe the Shevarnadze visit should be seen in the context of attempts to solve other regional problems in which Washington and Moscow have a joint interest.

If the US is prepared to join the Soviet Union in a search for a Middle East settlement it would mark a very significant change in its previous posture, expressed most emphatically by Dr Henry Kissinger when he was Secretary of State. The firm position for most of the 1970s and 1980s until the Gorbachev era was to stop Moscow at all costs from meddling in regional affairs. That posture is clearly no longer realistic.

Soviet moves towards a normalisation of relations with Israel – Moscow has said that it will re-establish relations when Israel agrees to an international conference – has shifted, although not completely removed, one of the main obstacles to its full participation in peace efforts.

Mr James Baker, the US Secretary of State, who is continuing to insist that "quiet consultation" be applied to the problems of the Middle East, may find it increasingly difficult to hold to that position.

Apart from the Soviet initiative, the Bush administration is also having to contend with pressures from moderate Arabs and from the European community. These pressures may well intensify, especially since there is little sign of the Israelis crushing the Palestinian uprising in the Occupied Territories.

Hopes in the Bush administration that there would be a longish gestation period while a new Middle East policy was formulated seem optimistic. The US risks disappointing its friends and allies in the region and in Europe if its fails to assert an early leadership role.

Arab officials say that the Soviet intervention in the region should not necessarily as threatening by the US. "The Soviet Union want to position itself in the centre of things," said an experienced official, "but it is not trying to diminish the US role. The Russians are seeking to participate in a joint enterprise."

"They are joining an orchestra," he declared, "all of which is playing different tunes."

Boat-people may be forced to go home

By John Elliott in Hong Kong

SIR DAVID WILSON, governor of Hong Kong, is expected to warn Mrs Margaret Thatcher today that Hong Kong may eventually have to introduce forcible repatriation of Vietnamese boat-people who do not qualify as refugees, even if this raises an international diplomatic storm.

Forcible repatriation has been established Hong Kong policy since last June 16 when the colony changed its stance on the Vietnamese boat-people and said that all those arriving after that date would risk forcible repatriation.

Sir David reiterated the policy when he arrived in London on Monday for a week of government consultations. "It is absolutely necessary that we should go ahead with all parts of our policy including the mandatory repatriation of all who are not refugees to Vietnam," he declared.

But the policy is inoperable because Vietnam is only willing to take back volunteers – the first 80 of whom are to fly home next week. The Hong Kong and UK Governments hope that an international conference to be held soon on the problem will produce fresh initiatives.

There are now a total of about 25,700 boat-people in Hong Kong, 10,700 of whom have arrived since last June, and therefore are likely to be be classified as illegal immigrants qualifying for forcible repatriation.

Clampdown prompts Seoul party row

By Maggie Ford in Seoul

OPPOSITION and ruling party politicians in South Korea are headed for a clash following the Government's decision to crack down hard on demonstrations and to stop investigating the misdeeds of the previous ruler.

The ruling Democratic Justice Party (DJP), led by President Roh Tae Woo, has decided to boycott parliamentary hearings starting today into the 1980 killings by the army in the provincial city of Kwangju.

It has also directed police to mete out harsh treatment to demonstrators following a violent rally by farmers 10 days ago. Following a personal visit by Mr Roh to the national police chief, two demonstrations last weekend were crushed, attracting pubic criticism of the stern police tactics.

All three opposition parties yesterday condemned the police behaviour.

The Government has also recently injected an element of confusion into the political arena by back-tracking on its policy of rapprochement towards communist North Korea.

Yesterday the DJP said it would resist Opposition plans to revise the National Security law, under which contact with North Korea is punishable.

A leading South Korean businessman last month visited the North with Seoul's consent and signed agreements on a development project, raising hopes of a breakthrough in relations.

Mandela bodyguards murder charge

TWO members of the self-styled Mandela United football club, Mr Winnie Mandela's bodyguard, appeared in court yesterday charged with murdering 14-year-old Stompie Seipei, Reuter reports from Johannesburg.

Mr Jerry Richardson, the bodyguards' trainer, and Mr Jabu Sithole, another member of the club, were remanded in custody until February 28, the South African Press Association reported.

The two were among four members of the club detained on Sunday by police who raided Mrs Mandela's Soweto township home as part of a probe into the killing of the boy and the abduction of two other youths. The other two club members detained on Sunday were not charged and have been released.

Mrs Mandela, husband of Mr Nelson Mandela, the jailed nationalist leader, has acknowledged that Stompie Seipei and other youths were taken by club members late last year from the home of a Methodist minister who runs a shelter for homeless children in Soweto.

She denies any wrongdoing and alleges that they were taken because they were being sexually molested by the white clergyman – a charge which the minister and top church officials deny.

The killing of the boy, whose decomposed body was discovered with a slit throat early last month, is the latest in a series of scandals surrounding Mandela's bodyguards.

● At least 50 South African political activists who had been detained without trial were given their freedom yesterday as part of a government deal aimed at ending prison hunger strikes.

Battle in Sudan to make the punishment fit the crime

Julian Ozanne examines the clash between the Moslem north and Christian south at the introduction of Islamic law

ON the outskirts of the dirty, dusty and dilapidated city of Khartoum stands the ramshackle offices of a group of poor and destitute people most Sudanese would prefer to forget.

Hidden in a maze of sunblasted, sandy streets, a small tumbledown brick house has become the centre of the Sudanese Association for Amputees. Amnesty International estimates that between 1983 and 1985 at least 150 men had either their right hand or their right hand and left foot chopped off as a punishment for theft under the infamous September Laws - an Islamic legal system introduced by former military dictator Jaafar Nimeiri.

"The harsh application of these laws was one of the greatest crimes in the annals of human history. It was a terrible offence against civilisation," said Mr Abdullah Hassan, president of the Bar Association.

Mr John Ruben, a Christian from the southern town of Juba, was 19 and unemployed in 1983 when he was arrested in Khartoum for stealing wood, a crime he denies.

At his trial he was denied the right to have a lawyer and no witnesses were called. The judge sentenced him to amputation and refused leave to appeal. He was taken to Kober prison where prison warders cut off his hand with a kitchen knife.

"It is very difficult for many of us to get work because we have been permanently marked as thieves, and women are not interested in us because they think we are dirty," he said.

The introduction of the September Laws in 1983 was, ultimately, one of the reasons for the fall of Nimeiri 18 months later. Non-Moslem southerners, who were forced to live under Islamic law, cited the measures as a major reason why they took up arms against the regime, a decision that significantly destabilised the Government.

Although the laws were suspended by the civilian Government of Prime Minister Sadiq El Mahdi when he came to power in 1986, they were not abolished. The courts have continued to impose Islamic punishments but none has been carried out.

And now a renewed attempt is being made to reintroduce Islamic or Shari'a law, spearheaded by the fundamentalist National Islamic Front, which this month gained a significant increase in power inside the coalition government.

Despite the warnings by the rebel Sudan People's Liberation Movement, the Government's opponents in the five-year-old civil war between the mainly Arab Moslem north and the mainly Christian African south, that peace is impossible with Shari'a, the NIF has pushed ahead with its campaign to reinstate Islamic law. A bill, temporarily frozen, is before a parliamentary sub committee awaiting its third and final reading.

"This law threatens to shatter our country into pieces, merely to satisfy the religious zealotry of a few fanatics," said Mr Hassan.

Southerners say Shari'a is completely unacceptable to them. The NIF's response has been to draft the new law so that the south will be exempted from it.

This leaves the problem of the estimated 1m-2m southerners who have drifted north to Khartoum and Kordofan from the ravages of war. It also raises questions about the concept of equality before the law as guaranteed by the Sudanese constitution.

"This creates discrimination in the process of treatment of citizens. If someone receives a greater punishment they will claim greater rights. The issue of exemption is just a ploy to fool the outside world, to build a strong Islamic state in the north and then to go on a holy war against the south to islamicize it by force," said Mr Yohannes Akol, a southern MP.

Another reason for hostility to the new bill is the inclusion of the crime of apostasy. According to Islamic legal experts, this is defined as deserting one's religion. Under Islamic law a Moslem cannot relinquish his faith.

In 1985 Mahmoud Mohamed Taha, the 76-year-old leader of the Republican Brotherhood movement, was publicly executed for subversion and apostasy, based on a pamphlet criticising Sudan's Islamic laws. Until his death he described himself as a radical Muslim who rejected some of the harsh doctrines of Islam and was working for a reformation of the religion.

Following his execution his followers were compelled to recant his views on national television.

"It was like a 15th-century Spanish Inquisition," said Mr Taha's daughter, Asma Mahmoud Taha.

"My father was fighting for a 20th century form of Islam. He believed you couldn't impose rules which were made hundreds of years ago when people's lives and needs were very different in present-day Sudan with all its problems of poverty and ignorance.

"The fundamentalists don't accept that Moslems have many different views about Shari'a. They believe Islam is a monolithic faith. They want to use these laws to silence freedom of thought and belief and opposition to their views. It is politically motivated," she said.

In this country, the biggest in Africa, where the Moslem Arab world meets the non-Moslem African world, the struggle over Shari'a has become a struggle about identity and the role of religion in public life. It is a battle between secularists, who want to keep the state and religion separate, and religious fundamentalists, who want to see them joined.

Like the September Laws the present penal code before parliament, drafted by Dr Hassan Turabi's, leader of the NIF, is drawn from the Koran.

According to Dr Idris Sallawi, a law lecturer at the Omdurman Islamic University, the Koran specifies six crimes *(hudud)* which are punishable with harsh penalties, known as *hadds*, believed to be divinely sanctioned. They are:

● Adultery, punishable by lashing or, if the couple are both married, stoning to death;
● Theft, punishable by amputation of the right hand;
● Drinking wine, punishable by lashing;
● Armed robbery, punishable by cross amputation – the right hand and the left leg;
● Defamation, punishable by lashing; and
● Apostasy punishable by crucifixion, or public execution with the body left for everyone to see.

"Laws must be based on the customs and beliefs of the people, especially criminal law which deals with crime, which is a social problem," said Mr Hafiz El Sheikh, Attorney General and Minister of Justice and one of the leaders of the NIF.

"Islam is not just a religion but a way of life. It has rules which govern public life as well as private life. We as Moslems believe Shari'a is an intrinsic part of our belief and, being the majority in Sudan, it is our duty to enact this as the law."

The problem is that at least 30 per cent of the country is estimated to be non-Moslem and many Moslem professionals and intellectuals are against the introduction of Shari'a.

WORLD TRADE NEWS

Car makers seek Toyota aid limits

By William Dawkins in Brussels

EUROPE'S leading car producers are putting pressure on Sir Leon Brittan, the European Commissioner for competition, to place strict limits on any state aid to encourage Toyota, the Japanese car maker, to build a plant in the EC.

They are anxious at suggestions that generous UK Government investment incentives might be offered to entice Toyota to Britain, where the Japanese company is understood to be considering opening its first European plant, following the example set by a generously-aided Nissan in Sunderland two years ago.

A letter from the CLCA and the CCMC, the two European car industry lobby groups, urges Sir Leon to ensure that any Toyota investment aid sticks strictly within what is needed to compensate for the cost disadvantages of settling at a given spot. The project is understood to involve an investment of roughly $1.2bn and the creation of 1,000 jobs.

"There is a serious risk that any jobs created and investments so promoted would not lead to an improvement of the structure of the sector. On the contrary, they may simply undermine the viability of the manufacturers already established in the Community, which have not received such support," warns the letter, signed by Mr Umberto Agnelli, president of the CCMC and head of Fiat, and Mr Gregoria Rampa, president of the CLCA.

The letter is one of the clearest signs yet of the extreme sensitivity felt by the European car industry towards further Japanese investment in Europe.

"Given the delicate balance of competitive conditions among motor vehicle manufacturers established in the EC...it is important that potential new investors like Toyota do not receive any aid from national, regional or local authorities in excess of what is objectively justified," the letter says.

A Commission official confirmed that any state aid offered to a Toyota investment in the EC would have to be cleared by the Brussels authorities, who "would weigh up the regional advantages and the sectoral effects on the EC car industry".

Tougher state aid rules adopted by the Commission last month oblige Governments to get case-by-case clearance for subsidies for any car industry project worth more than Ecu 12m (£7.8m).

Unequal race in China's car plants

John Elliott, recently in Shanghai, on two roads to production

THE only way to see if the apparently stationary conveyor belt of Shanghai Automobile Works' final assembly line really moved was carefully to watch the point where it disappeared into the floor. There, 10 years ago, fractional progress was visible.

Today there has been only a tiny improvement. Four stately-looking Shanghai Sedans are now produced an hour instead of three – so the line's movement is just, but only just, discernible along its length.

Little else has changed in what was once China's only so-called mass production car plant since February 1979. I was there then with Mr Eric Varley, British Secretary for Industry, who was on a mission to sell British steelworks and power stations to China's newly opening economy (he had little success).

Now the cacophony of metal bashing in the body shop is just as deafening as it was then. Workers still clamber on car bonnets and boots to hammer away at rough metal pressings crudely produced from 30-year old heavily-worn dies – though many of the workers now wear tight jeans and bright sweaters instead of drab Mao-style overalls.

The old Mercedes-based, 35-year-old design is the same, apart from a new zany radiator grill and dashboard. This is the unchanging face of industrial China with its inefficiency and politically-influenced management.

In sharp contrast, the factory next door is a dramatic symbol of the change wrought by China's years of economic reforms since 1979. Here modern Volkswagen Santana 1800cc saloons are being produced by a 50-50 Sino-German joint venture to standards of quality – though not yet of productivity and efficiency – which can stand up to international comparison.

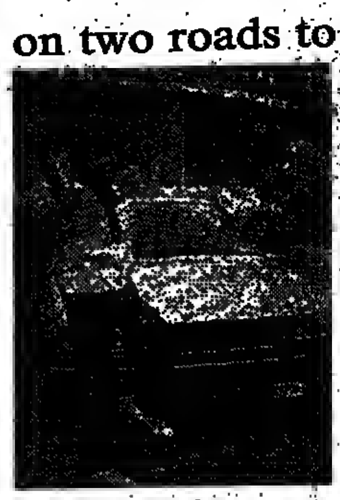
"We are breaking through Chinese concepts, combining Chinese experience with Volkswagen's," says Mr Yu Liang Kun, who is one of the country's new generation of enthusiastic young managers despite his bureaucratic-sounding title – manager of the managing director's office.

Six years after it started trial manufacturing, Shanghai Volkswagen expects to produce 17,000 Santanas this year. That is 2,000 more than last year, but 3,000 less than planned because economic cuts have reduced demand from government departments and cadres. The target is 60,000 – or 200 a day – in 1992 when the first seven-year phase of the 25-year joint venture ends. There have been small profits for a couple of years.

Both companies have to buy their materials and distribute most of their cars through the same Shanghai government-controlled system. But there the similarity ends. Mr Lin Sheng-Dao, Sedan's deputy director, talks of increasing his production rate from 4,200 cars in 1987 to 10,000 in 1990-91 with only a marginally improved engine.

VW is in a different league. It aims to consolidate its position as one of China's three officially-designated car producing centres which are expected to spearhead expansion of production from a countrywide total of 30,000-35,000 cars last year to 700,000 by the year 2000.

Executives say they hope to produce their own Chinese-designed car in the mid-1990s with the help of a technology centre now being built up to develop components and spares capable of export to other VW plants around the world. That would involve building a car plant to produce 300,000 cars a year.



Symbol of change: start-up day for Volkswagen in Shanghai

Volkswagen has a 50 per cent stake in its venture which will have cost Yuan 1.3bn (£200m) – including DM400m (£125m) in foreign exchange – by the time the plant is complete next year.

There are three Chinese partners, including the Bank of China, which helped negotiate a contract avoiding many foreign exchange problems experienced by other joint ventures. The bank also organised VW last year to become the first foreign joint venture to issue bonds to the public – Yuan 29.5m was raised to help domestic financing.

"You need a Chinese partner to help you with the bureaucracy and other problems," says Mr Norbert Pils, finance director, listing the sorts of difficulties faced by joint ventures in China. These included transport, scarce material supplies, and prices and dues charged by state organisations for items such as electricity.

VW had to start virtually from scratch finding component suppliers and has been trying with only limited success to persuade European suppliers to set up joint local production ventures. "We have a serious problem maintaining consistent quality of components. One day a firm delivers good products, the next week it is all rubbish," says Mr Pils.

About 30 per cent by value of production has been localised. This is expected to rise to 50-60 per cent this year including the manufacture of engines, transmission and pressings as new production shops are opened.

"I am very competitive on quality but not on price," says Mr Burkhard Welkener, the senior West German executive who is in charge of commercial activities. He wants to export Santanas to friendly countries to help compensate for reduced domestic demand. He is also planning component exports to VW outlets overseas, including engine blocks in 1991.

The management structure is based on VW's West German practice with four equal-ranking top executives in charge – two West Germans plus two Chinese, one of whom is managing director and co-ordinator. The factory's Communist Party secretary plays no managerial role. In the Sedan factory he is much in evidence.

VW's main managerial problem has been to persuade Chinese managers to take individual responsibility and decisions. "They have to change their attitudes from working in state-owned enterprises where there is only one managing director who deals with absolutely all questions and decisions. They have to learn to take decisions themselves," says Mr Pils.

The partnership seems to be working well. "It takes time in China to learn to wait," he adds.

Two US trade disputes defused in Gatt

By William Dullforce in Geneva

TWO POTENTIALLY explosive trade disputes involving the US were temporarily defused at a special meeting of the General Agreement on Tariffs and Trade council yesterday.

After blocking the matter at two preceding meetings, the US agreed that a Gatt disputes panel should hear a Brazilian complaint against import sanctions worth $39m (£21.6m) a year imposed in a row over pharmaceutical patents.

The EC did not press its demand for a similar panel to examine its charge that US sanctions against $100m-worth of EC farm exports broke Gatt rules. Washington had retaliated against the EC ban on hormone-treated meat imports.

Mr Tran Van Thinh, the chief EC delegate, said that while he was keeping the request for a panel on the table, he appreciated the US was not in a position to agree to one now.

Mr Frans Andriessen, EC Trade Commissioner, and Mrs Carla Hills, US Trade Representative, calmed the row in Washington at the week-end by giving a joint task force 75 days to find a solution.

Yesterday's council had been called to hear the Brazilian case against 100 per cent duties the US has put on some imports from Brazil in retaliation for its alleged failure to pay for patented pharmaceutical processes.

More than 50 countries, including the EC states, backed Brazil's demand for a Gatt panel at the last council meeting in what many governments have come to regard as a test of Washington's commitment to the multilateral trading system.

Brazil won its panel but not before Mr Michael Samuels, Deputy US Trade Representative, insisted the panel should "hear the full story".

He claimed Brazil's policy had permitted misappropriation of US inventions worth many millions of dollars a year. Brazil had refused repeated requests for intellectual property protection.

If Gatt were to remain viable, it was essential that rules for effective protection of intellectual property be negotiated in the Uruguay Round.

There was an imbalance in rights that afforded Brazil an opportunity in Gatt to address a dispute affecting its exports while denying the US the ability to address a Brazilian practice affecting the same amount of US trade, Mr Samuels said.

Mr Rubens Ricupero, Brazil's ambassador to Gatt, said Mr Samuels' description of his country's policy on intellectual property was over-simplified.

Brazil had been the first developing country to adopt comprehensive legislation on intellectual property and was prepared to discuss any matter related to intellectual property in the right forum – the World Intellectual Property Organisation.

Split on new Lomé trade convention

NEGOTIATORS from the EC and the 66 African, Caribbean and Pacific (ACP) states remain split on key aspects of a new Lomé aid and trade convention after last week's ministerial discussions in Brazzaville, David Buchan reports from Brussels.

EC officials said yesterday both sides agreed on the basic structure of a new agreement, including the possibility that Lomé IV, due to begin in February 1990, might be for longer than the usual five years.

But they were still split on the new convention's trade conditions governing market access, rules of origin and safeguard clauses for ACP products, while agreeing on the principle but not details of how to maintain the Stabex and Sysmin programmes in agricultural commodities and minerals respectively, to stabilise ACP export earnings.

Mr Edwin Carrington, secretary-general of the ACP secretariat in Brussels, complained yesterday that EC offers to help ACP states improve access to non-EC markets were "no substitute for removing obstacles to our products in Europe." The next ministerial negotiation session is planned for May.

US bank in Israel aircraft deal

By Andrew Whitley in Jerusalem

A JOINT venture recently formed by American Express Bank and an Israeli entrepreneur, Mr Ezra Harel, is to finance a planned expansion of state-owned Israel Aircraft Industries' aircraft upgrading and conversion activities.

The new company, Aviation Express, which is also seeking to promote research and development projects in Israel, represents an unusual marriage of US capital and Israeli technological capabilities.

Its novelty can be judged by the fact that not one US bank is at present represented in the Jewish state.

IAI confirmed discussions had been held with a subsidiary of American Express with a view to the joint marketing abroad of work on civilian aircraft handled by the company's Bedek division.

"They will try to find aircraft for us and finance the work," he said.

Since cancellation of the Lavi combat aircraft in 1987, IAI has retrenched its activities, pulling out of the manufacture of military aircraft and putting greater emphasis on upgrades and conversions of passenger aircraft to cargo. Latin American countries have been among its best customers.

Representatives of the joint venture are understood to have approached the Chief Scientist's Office of the Ministry of Industry and Trade, to explore the possibility of obtaining matching funds for company start-ups, in which it would take equity participation.

Cathay Pacific to boost flights

By John Elliott in Hong Kong

CATHAY PACIFIC Airways is expected to introduce up to six extra passenger flights a week from Hong Kong to London, following an agreement reached in London during the past few days about how the operations of British Caledonian, now part of British Airways, should be rearranged.

This is a victory for Cathay, Hong Kong's international airline, which has been pressing for extra flights for a long time. Cathay, British Airways and British Caledonian have all been allowed 10 flights a week, although only Cathay has been operating up to its full allocation.

After it took over Caledonian, British Airways continued operating Caledonian's flights in the Caledonian livery in order to protect its rights. Now it has been agreed that British Airways and Cathay can both fly up to 21 flights each, including cargo operations.

This means Cathay will be able to add up to six passenger flights to its present total of 10 in addition to five freighter flights. British Airways which has no freighter flights, will add six Caledonian current flights to the nine it has been operating, leaving a considerable margin for future expansion.

Cathay recently applied to the Hong Kong government for a 10 per cent fare increase on the London route, its first increase since 1985.

UK NEWS

BR accepts full responsibility for Clapham crash

By Rachel Johnson

BRITISH Rail has uncovered a chain of "human and procedural and systematic failings" which led to the rail disaster at Clapham, south London, in December, the inquiry into the crash was told yesterday.

"Today British Rail wears a white sheet because it accepts responsibility and legal liability for the death of 35 people and for the injuries to many more in the Clapham disaster," said Mr Roger Henderson, barrister for British Rail.

"Excuses would not be offered" for BR's failures.

It was determined to correct its deficiencies to avert "another Clapham" and had made itself the subject of self-critical analysis from top to bottom. "The judgment on management will not be fudged."

The disaster occured while new signalling was being installed.

Mr Henderson said there had been "flawed" decisions on the re-signalling scheme, faults in the installation of which caused the disaster, which compromised passenger safety. Technicians' deficiencies were only partly to blame.

BR's safety system for testing and checking was ineffective. BR's procedures had failed to break the chain which led to undiscovered and uncorrected workmanship and other deficiencies.

Bad workmanship on signals had never before had fatal consequences, Mr Henderson said.

The adequacy of staff training, and testing and supervision *procedures at Clapham* were open to question.

Mr Henderson said auditing of work across the country had shown that the bad working practices at Clapham were not mirrored elsewhere.

The cause of the accident, in which a train from Poole, Dorset, rammed a stationary train from Basingstoke, Hants, was clear, Mr Henderson said.

The "failsafe" signalling mechanism designed to prevent one train from entering an area occupied by another had failed. This was because resignalling work carried out by Mr Brian Hemingway and Mr David Dowd, the technicians, caused a malfunction. By the "wickedest mischance", this signal failure set a trap on the blindest corner of the route, he said.

Mr Michael Spencer, counsel for the bereaved, said the evidence so far showed a "woeful lack of investment leading to shortcuts being taken, and essential steps relating to safety being neglected."

Chatlines approved by Monopolies Commission

By Hugo Dixon

BRITAIN's controversial chatline services – which allow groups of people to gossip to one another over the telephone – should be allowed to continue, the Monopolies and Mergers Commission recommended yesterday.

However, Sir Bryan Carsberg, the director general of telecommunications, said he did not feel bound to follow the MMC's recommendations, even though he had commissioned its report. Sir Bryan said he would consider the MMC's views and listen to other parties before making his own proposals in about two weeks.

The chatlines are no longer operating after a decision by British Telecom, Britain's dominant telecommunications operator, to cut them off earlier this month. Several private companies providing the services are challenging this in the courts.

The controversy stems mainly from concern that chatlines encouraged teenagers to run up large telephone bills payable by their parents. There have also been worries about use of such services in arranging 'romantic' rendezvous.

The MMC concluded that the chatlines, which generated a revenue of £2.6m in the three months to June last year, operated against the public interest because of people running up bills on behalf of others. However, it also said they had value for those users who were prepared to pay and that measure which jeopardised their continuation would not be justified.

The MMC therefore rejected Sir Bryan's original proposals last July that chatlines should be accessible only to those customers which expressly asked for them and only when itemised bills were also available. The technology for implementing those conditions is not yet in place.

Instead, the MMC has advised Sir Bryan to negotiate a code of practice with the companies providing chatlines. Such a code could contain provisions for a fund to compensate customers faced with excessive bills for phone calls they had not authorised.

Growth hits 4.5% in 1988 despite slow last quarter

By Simon Holberton, Economics Staff

GROWTH in Britain alowed dramatically in the final three months of 1988 but the economy grew by 4.5 per cent in the year as a whole, according to official preliminary estimates released yesterday.

The estimates of gross domestic prodnct, which were published by the Central Statistical Office, show that real output in Britain, after allowing for the effects of inflation, rose by 0.1 per cent in the December quarter, compared with the previous three-month period.

The CSO said growth was 3.5 per cent higher in the fourth quarter compared with the level prevailing in the last three months of 1987.

Excluding North Sea oil, growth in the *fourth* quarter was nearly 5 per cent higher than in the previous corresponding period.

Over the year as a whole, growth in non-oil sectors of the economy was up 5.5 per cent.

The output measure of GDP is regarded by the CSO as the best indicator of short-term trends in growth. But officials warned against reading too *much into the preliminary* figures, which were based largely on estimates

Officials said there were no firm figures for construction industries, but there were indications from preliminary figures that output had slowed in service industries.

The Treasury said that it was very difficult to discern a trend in yesterday's figures. It said they were extremely preliminary and based on projections which might be altered when a full set of GDP figures was released next month.

The Treasury's comments indicate that it the expects growth to be higher than the forecast of 4.5 per cent made in November last year

Its forecasts for this year and its estimates for last year's growth rate will be included in the budget on March 14.

● The number of long-term unemployed continued to fall at a steady rate in the three months to January, the Department of Employment reported yesterday, writes Peter Norman. *The number of benefit* claimants out of work for 12 months or more fell by 64,000 in the latest quarter, maintaining the momentum of the previous three months

Mortgage arrears and repossessions by building societies fell more sharply than expected last year, but the trend may be reversed in the first half of 1989, said the Building Societies Association, writes David Barchard.

In the second half of 1988, building societies repossessed 6,380 homes, 35 per cent fewer than in the first half of the year and 43 per cent below the same period in 1987.

Mr Mark Boleat, director general of the BSA, said falling unemployment and the house price boom were the main reasons why mortgage arrears fell steeply last year.

At the end of 1988, 37,440 loans were between six and 12 months in arrears, 0.62 per cent of all society mortgages. Some 8,930 mortgages were more than a year behind with payments.

Mr Boleat said rising house prices enabled people in difficulties with mortgage payments to deal with them more easily by selling their house and moving to a cheaper property. But he said that interest rate increases in the second half of last year would not necessarily mean an increase in arrears and possessons, though building societies were already reporting an increase in short-term arrears.

Financial targets moved to ensure bullseye

Simon Holberton on the Government's bid to lend coherence to its economic policies

AS AN icon of Mrs Thatcher's economic policy the medium term financial strategy (MTFS) stands alone.

It represented the Government's determination to pursue unpleasant policies for the long-term good. But over the past two years the MTFS, which attempts to make Government policy more predictable over a period of years, has begun to look tarnished.

One of the most difficult issues that Mr Nigel Lawson, Chancellor of the Exchequer, has to consider as he frames next month's Budget is how to make the MTFS, which is seen as a target which is moved according to the prevailing economic background, credible again.

With monetary growth exceeding its target by a wide margin, a Budget *surplus* of £13bn or more, inflation rising towards 8 per cent, what the Chancellor says about future course of the economy is of more than passing interest this year.

Mr Lawson used to say that a Budget deficit equal to 1 per cent of gross domestic product was the modern equivalent of a balanced Budget.

Last year he proclaimed the old-style virtues of a truly balanced Budget. This year, he has to explain the efficacy of a *Budget surplus which he might* project as far ahead as 1992/93.

The MTFS represents an attempt to give intellectual coherence to the Government's economic policies.

It used also to be about rules *and, until last year, it* contained warnings that if, for example, monetary growth exceeded target then interest rates would go up.

To many independent observers of the Government's record the MTFS, which it concedes had powerful and beneficial effects on inflation expectations in the early years, has become a yearly exercise in rationalising past mistakes.

It is seen as meaningless as a medium-term view of the Budget because all its formulation entails is making the result for the ending fiscal year the target for the year ahead. Similarly, as a guide to the economy it has lost credibility.

Mr Gavyn Davies, chief UK economist with Goldman Sachs, the US securities house, points out: "If they change the target every year what is the value of a medium-term target? A medium-term target should be one you come back to if you deviate from it."

One of the most important guidelines was the growth in money gross domestic product – what Sir Geoffrey Howe, Mrs Thatcher's first Chancellor of the Exchequer – used to call the national cash limit.

But after two years of unexpectedly rapid growth in this measure of national income, which has led to virtually all of the guidelines inherent in the 1987 and 1988 versions of the MTFS being broken, questions are being asked as to the validity of this yearly ritual and the tasks it sets Government.

The House of Commons Treasury and Civil Service Committee pointed ont recently that the Government's hope of reducing inflation to 3 per cent "always remains three years from being realised" in the official medium-term projections contained in the Budget.

The MTFS has gone through a number of significant changes since Sir Geoffrey, unveiled it to an unsuspecting world in his Budget of 1980.

The history of the MTFS is one of moving from dogmatism to pragmatism. The relationship between monetary growth and economic activity was *difficult to predict so the emphasis* of policy switched from achieving targets to assessing "monetary conditions".

It was the third MTFS, that of 1982, in which the Treasury introduced the concept of "monetary conditions" and into this loose formulation also crept the first mention of the exchange rate as an important element in policy.

As the reliability of monetary aggregates grew so did the importance of the exchange rate. By 1987, with all monetary targets with the exception of MO ditched and even it devalued in significance; there was only the exchange rate left.

The Treasury line last year was that particular importance was attached to stability of the sterling/D-Mark exchange rate: it was what industry wanted and it provided an anchor against inflation.

That was shot ont of the water by the events before the Budget, when the Government uncapped sterling. Mid-way through 1988, after its summer review of the economy, the Treasury had embarked on a tightening of monetary policy; its sensitivity to the £/D-Mark *rate had become considerably* diminished and it has highlighted the MO.

Some independent economists expect Mr Lawson to reaffirm in his Budget speech the validity of his target for growth in MO might even give it a higher priority than the exchange rate.

But how Mr Lawson deals with the Exchequer's riches over the coming years has also excited interest. As Mr Bill Robinson, director of the Institute of Fiscal Studies says: "Anything he does this year is going to be different from anything he's done before."

Mr Robinson believes that in explaining the windfall gains to the Exchequer this year, the Chancellor will invoke the notion of "in-built fiscal stabilisers", that is, what naturally occurs to the Budget deficit/surplus, during periods of rapid or slow growth, in the absence of any change to rates of taxation.

On this view the Chancellor will explain his Budget surplus as being the product of rapid economic growth. "He will probably forecast the same surplus out to 1993 and point to it declining as a share of GDP," Mr Robinson says.

TREASURY RECORD ON PROJECTING INFLATION

Financial Year	1982	1983	1984	1985	1986	1987	1988
'82	8	7	8.5				
'83		5.5	5.5	5			
'84			4.5	4	4	3.5	3
'85				5	4.5	3.5	3
'86					3.75	3.75	3.5
'87						4.5	4
'88							4.5
Actual Rate	7.25	4.5	5	5.5	3.25	5.25	6.25*

Per cent change in the GDP deflator at market prices projected in successive Budgets
* Autumn Statement Estimate

Beecham to sell new drug for heart attack victims

By Peter Marsh

BEECHAM, the British pharmaceutical company, yesterday announced it has gained a UK product licence for selling Eminase, a new drug which it has developed in its own laboratories and which is thought to have a high potential for treating victims of heart attacks.

Eminase, which some analysts think could account for worldwide sales of up to £150m a year by the early 1990s, is available in West Germany but not the US, France and Italy.

Eminase is one of a general class of drugs called thrombolytics which can be given to people shortly after suffering a heart attack. The products dissolve the blood clots involved in such attacks and which can often cause death by disrupting blood flow.

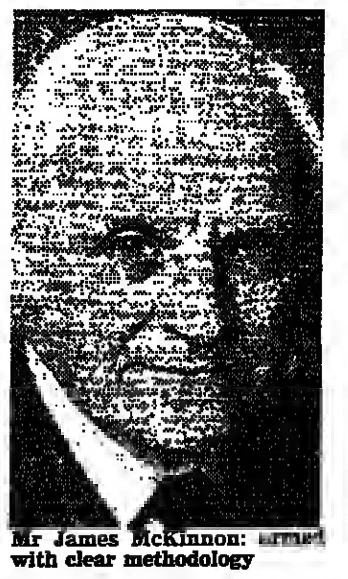
Beecham said yesterday clinical trials had shown prompt treatment with Eminase roughly halved the chances of a patient dying in the period immediately after a heart attack. The drug could be available in the UK before the summer, pending Department of Health approval.

Drug research, Page 9

UK NEWS

Pressure rises on British Gas over finance policies

By Max Wilkinson, Resources Editor



Mr James McKinnon: with clear methodology

BRITISH GAS is likely to be required to change significantly the way it allocates costs and profits after a review by Mr James McKinnon, the Government appointed regulator for the industry.

They could have far-reaching effects on the ability of competitors to use British Gas's pipelines and on the way in which domestic gas prices are calculated.

British Gas does not publish separate profit figures for its monopoly sales to domestic customers in the tariff market, for sales under contract to commercial and industrial customers or its pipeline business. Nor does it make a strict division of its costs between the three sectors.

Mr McKinnon, director-general of the Office of Gas Supply (Ofgas), has almost completed an analysis of the corporation's unpublished figures to divide up the costs and profits between the three sectors.

British Gas, which has co-operated in the project is still arguing about how the new financial system should operate.

Mr McKinnon said: "I am very clear about the methodology I would like to follow. They have their ideas and they are not the same. British Gas sees the business as totally integrated, but I see scope for different allocations of costs and different investment tests in different parts of the business."

A key difference in the approaches is that Mr McKinnon's method would load more of the overhead costs onto the tariff sector. This by itself would tend to put up domestic gas prices. He suspects, however, that the corporation may prove to be making rather high profits in this sector. "The reward in the tariff sector should be closer to that on a gilt-edged stock than on a high risk investment," he added.

Mr McKinnon says he does not know yet what the full implications of the new analysis will be for domestic gas prices, and the formula which governs domestic tariffs has three more years to run before it is due to be revised.

Ofgas will also be using the new system to assess charges for use of British Gas's pipeline by competitors. Several companies are now negotiating with British Gas to use its system.

Under present rules, Ofgas can lay down terms and conditions in the case of a dispute, though it could be challenged in the courts. In the case in which Mr McKinnon has been asked provisionally to give a ruling, British Gas is insisting on very high performance standards for matching input and output to its system. If they are not met, the corporation could cut off supplies.

If the dispute cannot be settled, Ofgas is likely to insist that a failure to meet technical standards should result in a reasonable financial penalty rather than cutting supply.

Time of trial, Page 18

GPT plant to build Amstrad computers

By Hugo Dixon

AMSTRAD, the consumer electronics group, is to make up to 20 per cent of its new range of high-performance computers at the GPT (GEC-Plessey Telecom) plant in Kirkcaldy, Scotland.

The company's decision is a reprieve for the Kirkcaldy plant, which was threatened with closure as part of a reorganisation of the UK's largest telecommunications group.

Amstrad has hitherto had all its computers made at low-cost facilities in the Far East.

The group has been seeking to source a larger proportion of its products in Europe in response to the European Commission's anti-dumping investigations into electronics goods made in the Far East.

Making each computer in Kirkcaldy will cost Amstrad about £10 more than making one in the Far East, but Mr Alan Sugar, its chairman, believes this is a worthwhile expense to avoid trouble with the Commission.

The Kirkcaldy plant employs 700 people and is the town's largest private-sector employer. It was threatened with closure when GEC and Plessey merged their telecommunications interests to form GPT last March.

As part of a cost-cutting programme, manufacture of GPT's "System X" telephone exchanges was to be concentrated at two sites in Liverpool and Coventry. This, it was feared, would leave Kirkcaldy with no work.

Under the deal with Amstrad, GPT will eventually make up to 10,000 computers a month. The Kirkcaldy plant is also still manufacturing System X exchanges – albeit at a lower rate than in the past – and will continue to do so for the "forseeable future".

GPT said the Amstrad deal would ensure continued employment at Kirkcaldy. However, it was not clear whether it would be enough to safeguard all 700 jobs.

ITV groups 'unlikely to survive'

By Raymond Snoddy

THE MANAGING director of one of Britain's largest ITV companies said yesterday that few if any of the 15 regional ITV companies were likely to survive as independent operators through the 1990s.

Mr Leslie Hill, managing director of Central Independent Television, told the Financial Times cable and satellite conference in London that there would be fewer companies, "but even the remaining companies will find themselves part of larger groups."

There was nothing wrong with that provided the groups were run on decentralised lines.

The first takeover targets – the Government has proposed that in future ITV companies can be taken over – would be the ITV companies which had diversified because their break-up value would make them more attractive.

Mr Hill also said that the BBC and ITV did not provide viewers with adequate choice at peak viewing times. "If we wish to tackle the new competition (from cable and satellite) then we should be making sure that we provide high-quality, entertaining and interesting programming at appropriate times in the schedule," Mr Hill said.

Mr Michael Checkland, BBC director-general, said the corporation planned to distribute a channel compiled from BBC1 and BBC2 by high-power satellite to cable networks over Europe.

Talks were being held with the European Space Agency to carry the BBC channel on the experimental Olympus Satellite, to be launched later this year. The BBC's main audience targets are in Spain, Austria and Switzerland.

Japan takes first step into steel industry

By Nick Garnett

JAPAN has taken its first tentative step into the British steel industry with a joint venture deal between Mitsui, the large trading group, and William King, a West Midlands steel processor.

The agreement involves the setting up of a jointly-owned steel processing plant and stockholding operation in the North-East of England at Washington, Tyne and Wear.

The new company, Mi-King, is 50 per cent owned by William King, with 30 per cent held by Mitsui's UK subsidiary and the remainder by Mitsui in Japan.

Mi-King has initial capitalisation of £2.5m and will employ just 15 people but the intention is to expand the operation. It will use a 57,000 sq ft segment of a converted former TI Tube Products factory.

The company is hoping to supply steel to component suppliers for the Nissan car plant, also in Washington.

The move is the first sign that the setting up of Japanese assembly and manufacturing operations in the UK, which has already led to the establishment of Japanese component companies, is also having an impact on the supply of raw materials.

Mitsui said yesterday it had teamed up with a British company because of expected increases in demand for high-quality steel parts as a result of Japanese companies setting up in the UK.

Mitsui has set up similar ventures in the US in Tennessee and Indiana in cooperation with an American company, Steel Technologies.

William King, based in West Bromwich, employs 180 people and last year had sales of £35m. It specialises in processing flat rolled strip mill products.

Mr Peter Ullathorne, managing direction of the new operation said Mi-King intended to supply steel to the domestic appliance industry and other industrial sectors as well as to motor component makers. The UK steel, steel processing and stockholding industry has recently had an injection of foreign capital.

Sacilor-Usinor, the French state-owned steel group, purchased last month a 30 per cent stake in Howard E. Perry, a Wolverhampton steel stockholder.

Beltrame, a mini-mill steelmaker in northern Italy is planning to build a steel finishing plant at Boston, Lincolnshire.

The privatisation of British Steel in December also brought in a significant amount of foreign capital into the UK's largest steel producer.

Weather hits coal deliveries

By Maurice Samuelson

THE ELECTRICITY industry has asked British Coal to slow its deliveries of fuel to power stations because of the warm winter weather.

Together with better than expected performance by the Central Electricity Generating Board's nuclear plant, this could trim expected winter coal deliveries by 1m tonnes, leaving them 2m tonnes less than the 76.5m delivered to the CEGB last year.

The squeeze could cut the coal industry's proceeds by £30m, further underlining its financial troubles as it heads for a bottom-line loss of about £100m for the financial year.

British Coal's prohlems would be worse but for a voluntary agreement by CEGB to refrain from making greater use of its efficient oil-fired power stations.

Even a belated sting in winter's tail would come too late to cancel the effect of the last three and a half months' sunshine on demand for electricity.

Last week, the power stations asked British Coal to trim 100,000 tonnes from its weekly deliveries of 1.6m. tonnes. The CEGB is considering whether to keep its coal burn at the lower level for the rest of the winter. That would leave about 21.5m tonnes of coal in its stockyards at the end of the winter, 1.5m. tonnes less than forecast before winter.

Coal demand is also being squeezed by dramatic improvement in activity of the CEGB's nuclear stations, including the Heysham Two and Hinkley Point B advanced gas-cooled reactors.

Nuclear power is believed to be supplying about 17.5 per cent of electricity demand in England and Wales, nearly 3 per cent more than last winter. It has been estimated that 1m. tonnes of coal burn is replaced by each 1 percentage point increase in nuclear output.

The CEGB is also importing up to 1,500 MW of nuclear electricity through the cross-Channel cables linking it with Electricité de France, its French counterpart.

● Mr. Cecil Parkinson, Energy Secretary, said that there would be privatisation costs for the electricity industry and dismissed claims by opposition Labour MPs that the Government was trying to keep them secret. Documents leaked over the weekend predicted the costs would amount to £79 million for 1989-90.

Home appliance makers lay off workers

THE CONSUMER spending slump and unusually warm and dry winter weather have forced British home appliance and heater makers to lay off several hundred workers and impose short-time working, writes Christopher Parkes.

Hoover has laid off 150 temporary staff at its South Wales home laundry and dishwasher works and 100 at its vacuum cleaner factory at near Glasgow. Hotpoint, the GEC subsidiary, and its Creda stablemate are operating a four-day week in their main factories.

The Glen Dimplex group, which includes the Morphy Richards small appliance business and Dimplex heaters, has laid off about 500 temporary workers. Some plants are working only a three-day week. Group output was 65 per cent of last year's level, he added.

Crosslee, Halifax tumble dryer specialist, said UK sales, usually concentrated in the winter months, had slumped five weeks earlier than normal. A twilight production shift had been stopped. Few workers were affected, however, because overseas markets remained strong. Crosslee exports about two-thirds of its output.

In Brief

Bankers to testify in Norwegian tax case

LORD KINDERSLEY, a director of Lazard, the UK merchant bank, and Mr Arthur Hardman, a fnrmer senior employee nf the bank, must give evidence about the financial affairs of a wealthy Norwegian shipowner in a tax case in the Norwegian courts, the House of Lords has ruled.

The Court of Appeal in London had refused to order the two witnesses to give evidence. Five Law Lords have now overturned that ruling after Norway'e appeal.

Mr Hardman and Lord Kindersley had claimed that giving evidence on issues connected with the affairs of Mr Andres Jahre, who died in 1982, would break their duty of confidentiality as bankers.

Mr Jahre, whose estate is worth NKr338m ($50.5m), is alleged to have avoided tax by concealing assets, including those of a Panamanian company, Continental Trust.

Vending change

THE UK vending machine industry is preparing for the most radical change in coinage since decimilisation in 1971, when new 5p and 10p coins are introduced in the 1990s. The Royal Mint is expected to save £3m annually in metal costs, but the cost to the vending industry has been put at more than £30m by the Automatic Vending Association of Great Britain.

Hoare Govett sold

MIDLAND Montagu Futures, the largest trader on the floor of the London International Financial Futures Exchange, has agreed to buy Hoare Govett Fntures from Security Pacific. The deal is to be completed by the end of March.

Directors detained

THREE directors of Charnley Davies, the Leeds-based financial group which collapsed in January 1987 with losses of £5m, have been detained for questioning hy West Yorkshire Police Fraud Squad.

EMS call for UK

MR STANLEY Clinton Davis, the former European Commissioner, has called on the British Government to join the European Mnnetary System. Mr Clinton Davis told a Financial Times City of London seminar Britain should also join talks on a European central bank.

BT union election

MR TONY Young has been elected general secretary of the Natinnal Communications Union, the main union at British Telecom. Mr Young, 46, a left-wing candidate, will represent 154,000 employees working in the national telephone corporation.

Barclays launches new MasterCard

By David Barchard

BARCLAYS BANK yesterday launched its latest salvo in the increasingly fierce battle between different players in the credit card market. From March 6 it will offer a new MasterCard, designed to compete against the cards of the major retailers which are renowned for their high interest rates.

The launch coincided with a fresh warning from Mr Peter Ellwood, chief executive of Barclays central retail services division, that annual charges for credit cards may be introduced before too long. Mr Ellwood described the current pricing system of credit cards as "unsustainable."

Barclays Assent, as the new card is known, is intended for customers who know that they will not be able to repay their borrowing in full each month and are looking for a lower rate of interest than the 26.8 per cent annual rate charged by the major credit cards. However there will be no annual fee for cardholders.

While the new card is unlikely to take many customers from other existing credit cards, it will offer people looking for extended credit to buy consumer durables a better interest rate than they obtain when using store cards, which generally charge rates between 32 and 42 per cent.

"This is a highly responsible product which puts the cardholder firmly in control of his or her finances." said Mr Ellwood, "We believe that it is the cheapest bank issued credit card with no fee attached."

The card will belong to the MasterCard payments system which Barclays, the largest Visa card issuer in the UK, joined last September to compete with Lloyds Bank and the other big clearers in offering both Visa and MasterCard services to retailers.

Assent has heen carefully designed to ensure that it does not compete with Barclaycard, Barclay's main credit card.

Unlike Barclaycard, customers using Assent to make purchases will not enjoy an interest-free period between the date of the purchase and a specified payment date.

Instead Assent card holders will be entitled to credit of up to 25 times an agreed fixed monthly payment by direct debit.

New cardholders will pay interest of 19.9 per cent on money borrowed using the card, 6.9 percentage points below the Barclaycard rate.

Barclays is guaranteeing to all applicants for Assent who apply before the end of June that it will not allow the interest rate on the card to rise above 19.9 per cent.

The bank plans to spend £6m on an advertising campaign to promote the card and hopes that it will have picked up several hundred thousand customers by the year end. This compares with over 9m customers for Barclaycard.

London Life merger approved

By Raymond Hughes, Law Courts Correspondent

LONDON Life, Britain's oldest mutual insurer, has overcome the final obstacle to its proposed merger with Australian Mutual Provident (AMP).

A High Court judge yesterday made an order under the 1982 Insurance Companies Act sanctioning a scheme for the transfer of London Life's long-term business to AMP.

Mr Justice Hoffmann said he was satisfied the scheme was for the benefit of London Life's policyholders as a whole. Dissident policyholders said they were disappointed, but would not appeal.

Mr Oliver Dawson, London Life's president, said the decision vindicated the board's policy. "It was the board's duty to decide what was the best offer. It was not something that could be put as a choice to policyholders, as some people were trying to put forward."

Mr Richard Wales, AMP's UK general manager, also welcomed the decision. "This means that London Life can now put aside the uncertainties of the last few months and get on with its business again."

Mr Justice Hoffmann said the choice of scheme was a commercial decision for the London Life board. In deciding whether to sanction the chosen scheme, the court was not concerned with whether it might have been improved by further negotiation but whether, taken as a whole, it was unfair to any policyholder or class of holders.

He said objectors had argued that London Life should have merged with some company other than AMP, that the Japanese insurance market should have been explored and that policyholders should have been given the opportunity to opt out and transfer to the Equitable Life Insurance Society.

There was no evidence of any terms which might have been on offer from a Japanese company, the judge said. Under terms offered by Equitable, which had been the front-runner until AMP arrived on the scene, the funds would have heen amalgamated and the business carried on solely in the name of Equitable.

London Life's board preferred the AMP offer because, among other things, it attached a value to the name and goodwill of London Life.

The judge said that London Life policyholders would, by their votes at general meetings, have less influence in Sydney than they now had in London. "But the question is whether, given the safeguards in the scheme – the separation of the funds, the principles of financial management and inter-fund dealing laid down in the scheme, the roles of the UK board, the UK actuary and the UK system of regulation – it is still on balance advantageous to the policyholders as a whole.

"The independent actuary says that it is and the great majority of policyholders appear to agree. The objectors have not persuaded me that the majority are wrong."

Pharmaceutical research

Beecham tries to better the odds

Peter Marsh explains the UK drugs group's restructuring

Pharmaceutical development can be likened to a relay race in an earthquake zone. The process is highly time-dependent, involves interaction between individuals and can be interrupted at any time by a disaster.

Beecham, the UK drugs and consumer products group, has recently reshuffled its management structure with a view to increasing the chances of its pharmaceutical researchers coming up with winning products.

The new structure aims to integrate the group's marketing and scientific efforts in drug discovery. It is also attempting to marry these with the important area of licensing ideas to and from other companies.

Masterminding the effort is James Andress, an American who took over last September as head of Beecham's £900m-a-year prescription-pharmaceutical division.

The approach does not exactly break new ground as efforts to unify the various operations connected with drug development are also taking place in many other companies in the world's £70bn-a-year pharmaceuticals business.

Beecham's ideas, however, underline the degree to which virtually all players in this industry are fighting to combat a set of problems common to drug development.

These include the time and cost (up to 12 years and £80m) of bringing a new drug from invention to marketing; the increasing difficulty of satisfying government regulatory authorities; the degree to which development time eats into a product's 20-year patent protection; countering side effects of a product and the likelihood of it being outshone by a rival medication.

Additionally, today's pharmaceutical industry researchers are having to cope with more onerous and time consuming areas of drug development – those involved with cancer and heart disease for instance – than earlier, more straightforward healthcare problems, such as fighting bacteria-borne infections, which have already been tackled.

Whereas a decade ago a company's research group would work on the scientific parts of a pharmaceutical development and hand the product on to marketing only after several years' work, today most pharmaceutical companies involve marketing staff at the onset of a development programme.

"There should be a consensus view (from the different departments) as to what particular problems a drug is going to attack and how it should be marketed," says Andress, who was recruited to Beecham by Bob Bauman, a fellow American who took over as the company's group chief executive in 1987.

The 50-year-old Andress came to the UK after spells in top positions at two US pharmaceutical companies, Abbott Laboratories and Sterling Drug (where he was president and chief operating officer).

Andress does not try to pretend that he devised all the new management procedures in Beecham's prescription-drug division, which accounts for about a third of the company's turnover but half its profits. Many were already in place before his arrival, which was precipitated by his unhappiness at staying on under new management after Sterling was bought last year by Eastman Kodak, the photographic giant.

Better internal collaboration is an important part of Beecham's new management procedures. In theory, involving marketing people with researchers early on in a development programme should lead to fewer hiccups arising from people in the company being out of step with each other's thinking. That can happen, for example, if the researchers' view of the scientific potential of a new drug for heart disease does not fit in with their sales colleagues' ideas about the room for it in an already crowded market place.

Each new product that Beecham works on now has associated with it a project team composed of people from various parts of the company. That applies to drugs like Beecham's Eminase, which is a product for treating heart-attack victims and is near the end of its development procedure, as well as to formulations which are barely out of the laboratory stage. Eminase was granted a UK product licence yesterday, although it is as yet unavailable in other large markets for pharmaceuticals such as the US, Italy and France.

James Andress: better internal collaboration

For each product, the project team of perhaps six people – from Beecham units concerned with areas such as research, marketing and regulatory affairs – is likely to meet on a daily basis during the course of the development process. At any one time there will probably be about 12 product teams in operation for major drugs passing through Beecham's research programme.

"The idea is to give people a sense of ownership (involving the programmes they are working on)," says Andress. "People in these project teams will probably feel more a sense of belonging to their group than they do to Beecham itself."

Another move is to bring licensing more into the centre of Beecham's operations. It is generally acknowledged in the pharmaceutical industry that – with the possible exception of Merck, the world's biggest drugs company – no single group has the research and marketing expertise to cover all the commercially important areas of healthcare.

Licensing – either inwards or outwards – is not an easy matter, though. It involves striking up good relationships with other companies around the world in efforts to see which of many drugs under development in these companies might fit into an existing marketing portfolio at some time in the future.

Andress has given the job of looking after licensing to one executive – Ray Giles – who is one of four senior managers reporting directly to him. The others are Paul Tatman, who, as managing director of the Beecham drugs division, is responsible for broad commercial strategies; Tony Marson, the division's finance director; and Keith Mansford, who is in charge of research and medical affairs.

Other ideas Andress and his colleagues want to introduce at Beecham include:

● Better administration. This can apply especially in the clinical trials parts of Beecham's overall research and development programmes. Such clinical trials – involving dozens of doctors in different medical centres around the world and the collation of masses of data from patients receiving sample quantities of new drugs – can be a nightmare to administer and to obtain meaningful information.

● Speedier registration. If a company wants to get a product approved quickly by the government registration authorities that have to vet all new drugs, much depends on striking up better links with these bodies and putting information in a form that can be more easily understood at these organisations. Better use of computer techniques could have a part in speeding up this process.

● Commitment to basic research. Only about a third of Beecham's drugs research and development budget, now running at about £100m a year, is spent on basic laboratory research, with the rest going on clinical trials. Andress says the company is committed to maintaining a steady increase in the funds in this area – the funds went up by about 20 per cent between 1987 and 1988 – as a way of ensuring it comes up with good scientific ideas that lead to new drugs of the future.

As for the degree to which the new ideas at Beecham have an effect, it is clearly early days. The company's immediate future is much bound up with the success of Eminase – which the company hopes will be launched in the important US market fairly shortly – together with a number of promising drugs emerging from the Beecham development pipeline.

Over the longer term, Beecham may well find it has to fight hard for market share in a world drugs business which is becoming more competitive and in many ways tougher.

Andress is mouthing the sentiments of managers in virtually any other branch of international business when he says: "We have to be better organised. We have to be more efficient."

BEECHAM: PRESCRIPTION-PHARMACEUTICAL

	Sales(£m)	Trading profit(£m)	R&D spend(£m)
1986(e)	710	223	72
1987	783	252	81
1988	841	279	95
1989(e)	945	318	110
1990(e)	1,055	363	123

Figs year-end March 31 (e) estimate by Barclays de Zoete Wedd

Catching the boat by moving downstream

John Griffiths explains how both Du Pont and Dow are instigating their moves into the automotive industry

Stuart Wilson admits that car makers were becoming impatient with the way chemicals group Du Pont was doing business a few years ago. "We saw ourselves as essentially a raw materials supplier, and were conducting our auto business through six different divisions.

"As a result, there could be three or four different Du Pont guys calling on the same customer about the same business."

Wilson's title of director, automotive products department-Europe, provides in itself an indicator of the restructuring which has taken place at Du Pont, aimed at taking greater advantage of motor industry-related business.

Nor is Du Pont an isolated case.

Dow Chemical, like Du Pont a US multinational and one of the world's largest chemicals and energy groups, has decided that the future lies in moving "downstream" into providing more comprehensive services and products to key industries.

Over the past two years, Du Pont has combined its automotive materials and technology resources into a new global entity, the Automotive Products Department (APD), dedicated solely to servicing the motor industry.

Dow has not set up quite such a formal structure but, says Claude Fussler, Dow Europe's director, automotive materials, "two years ago we also decided on a strategic change, recognising that our next phase of growth will demand a focus on key industries. And the auto industry has become our first focus."

There are good reasons for doing so. The automotive sector was worth $2.5bn to Du Pont worldwide last year, some $500m of which was accounted for within Europe. Pro rata, Dow's earnings from the auto industry are not dissimilar. It spends about $100m a year worldwide on auto industry-related research and development alone.

Overall, auto business represents the biggest single market segment of Du Pont's $30bn a year-plus total turnover. Total turnover of Dow Chemical last year was around $16bn.

However, Du Pont's Wilson points out: "There is about $550bn in the total motor industry supply chain."

And both chemicals groups say there is the potential for them to take a significantly higher share of sales in this chain.

The purpose of Du Pont creating APD extends well beyond simplifying lines of communications with motor manufacturers, however.

Supply chain

It involves moving Du Pont "downstream" into the motor industry or, as Wilson explains: "We are starting to become involved in the production process at every point in the supply chain."

This means working closely with processors of raw materials, component makers, "first-tier" suppliers to vehicle makers (those which supply complex component systems) and the vehicle makers themselves in the R&D of new products and processes.

In this way Wilson believes that Du Pont could well alert an industry with its roots firmly in metal-forming to new ways of approaching engineering problems, using characteristics of plastics and other new materials.

Almost exactly the same might be said of Dow Europe. As Dennis Wilcock, Dow Europe's executive vice president, plastics, points out: "Plastics have become a very important part of the business," worth about $2bn a year to Dow in Europe alone.

The auto industry is the first to be targeted by Dow as a result of what Wilcock describes as "a major task force study" two years ago, in which a similar decision was made to move away from being a generic raw materials supplier in favour of targeting specific industries with developed products and processes.

If this sounds as if two of the larger chemicals groups in Europe have set themselves on a collision course, Wilcock stresses that he believes this not to be the case.

"Sometimes we (the chemicals industry) have not honed our skills as much as we should in areas where we have not had competition. And usually the motor industry wants two suppliers for a lot of components, as well as now requiring closer involvement of their suppliers in a product's design. So maybe it's better to have Dows and Du Ponts both thinking about specific problems."

Du Pont's Wilson goes so far as to envisage joint ventures with component suppliers in complementary areas. For example, he says, car inner doors have become very complex. Car makers could be supplied with door frames, or the process to make them, with the mechanisms moulded in.

Both companies have more than 60 product ranges of relevance to the motor industry, such as engineering plastics, elastomers, fibres, electronics products and finishes, which are already used by manufacturers throughout the world.

Although the companies' strategies differ in detail, both are concerned with building on these, by replicating in their group structures the globalisation process already going on among motor manufacturers themselves. To this end, Du Pont, for example, has set up APDs in the main vehicle-producing regions.

Teams of specialists, comprising design and process engineers, applications experts and others have been assigned to each of the major producers and their suppliers.

They have the twin tasks of ensuring that all Du Pont's resources are deployed in tackling each individual company's problems; and to identify specific performance and cost requirements for new models at the design and development stage.

"By being able to move up or down the entire supply chain, we can play a much more pivotal role in cutting the time and cost of developing a new car," maintains Wilson.

Dow's Michael Clark, R&D director, plastics, stresses that "you can no longer survive without being global – otherwise something's going to come out of Japan and whack us all over the head".

COMPANY NOTICE

NOTICE TO HOLDERS OF WARRANTS

MITSUBISHI MINING & CEMENT CO., LTD.

U.S.$100,000,000

4⅝ PER CENT BONDS DUE 1992
WITH WARRANTS (THE "WARRANTS")

Pursuant to Clauses 3 and 4 of the Instrument dated 13th October, 1988, the following notice of an adjustment to the Subscription Price (the "Subscription Price") of the Warrants is hereby given.

At the meeting of the Board of Directors of MITSUBISHI MINING & CEMENT CO., LTD. (the "Company") held on 21st February, 1989, a resolution was adopted for the issue of new shares by way of free distribution, the particulars of which are set forth below. Consequently, the Subscription Price of the captioned Warrants (the "Warrants") shall be adjusted, as specifically provided in paragraph 3 below.

1. The free distribution of new shares will be made to shareholders of record as of 31st March, 1989, at 3.00 p.m. Tokyo time, at a ratio of 0.09 shares for each one share held.
2. The free distribution shall be made on 19th May, 1989, but the dividends for these new shares will accrue as from 1st April, 1989, Tokyo time.
3. Pursuant to Clause 3(i) of the Instrument, the Subscription Price will be adjusted from Yen 785.00 to Yen 720.20 per share of the Common Stock of the Company effective as from 1st April, 1989.

Dated: 22nd February, 1989

By: THE MITSUBISHI BANK, LIMITED
as Principal Paying Agent
on behalf of MITSUBISHI MINING & CEMENT CO., LTD.

JOBS

Rare chance to run world famous institution

By Michael Dixon

NOT many jobs are so famous that the mere mention of their title would instantly register their importance with millions of people around the world. And of the few such posts that exist, far fewer ever appear on the open market.

So it is a rare opportunity that readers of this column are offered the first chance to apply for today. But I doubt that you will easily guess what it is from the news that the specification calls for someone who is above all a money-making manager "robust and worldly-wise" enough to take on "the most ruthless and commercially skilful promoters."

The job is running the Royal Albert Hall in London, whose world-wide fame springs mainly of course from that peculiar British institution – the Last Night of the Proms. It is televised each year not only live throughout Europe, but in recorded form to numerous more distant lands. There is also a wide although smaller international TV audience for several of the 60 more orderly concerts the hall stages in the annual eight-week Promenade season, not to mention the millions of radio listeners they attract.

Because of the hall's association with serious music, the ruling council's decision to look primarily for a money-maker to head its 70 staff will no doubt offend the good many people who think that such centres of the arts should be financed largely by public funds. But the fact is that the Albert Hall has never received much cash from tax- and rate-payers.

Although founded by Royal Charter and Act of Parliament in the 1870s and having charitable status, it has had to earn its own keep. Initial funds came from the sale of some 1,200 of its 5,500 seats, whose owners elect 18 of the 24 council-members headed by the president Sir Kirby Laing. Besides the Prom and similar concerts, revenue-raisers have included boxing, ice-skating, tennis, badminton and squash, and pop and other light music shows. For instance, one Francis Albert Sinatra is due to appear there in April.

The trouble is that, not least because of statutory curbs on the hall's activities, it has been hard-pressed to make enough profit to cover necessary improvements. The financial position has strengthened in the past nine years under general manager Cameron McNicol. But now he is off to set up Glasgow's International Concert Hall scheduled to open in 1990, the council seeks to replace him with a chief executive whose prime responsibility will be to maximise the Albert Hall's money-making potential within the demands of the law and of its high reputation.

"As a result, the job is open to a far wider range of people than are usually considered by organisations in the arts", says headhunter Simon Radcliffe of the IAM consultancy who is handling the search for the council. The key needs are profit-directed management skills and success in inventively running a complex with a great variety of commercial possibilities.

"Backgrounds we have in mind at the moment include department stores, shopping and leisure centres – even airports – and there may well be a good many more we haven't yet thought of. But despite being flexible in terms of suitable previous experience, it's a very tough job indeed."

As well as experience of negotiating commercial contracts and knowledge of the running of valuable buildings, candidates need highly developed skills in managing people. They should also have the sort of cultured and cosmopolitan personability required to represent the Royal Albert Hall in its external dealings internationally.

No salary is quoted, but my estimate would be around £50,000. The perks include a car.

Inquiries to Mr Radcliffe at 12 Phillimore Terrace, Allen St, London W8 6BJ; tel 01-937 8277, fax 01-937 2431.

Corporate gifts

SECOND today comes a job with another world famous concern, Tiffany of New York, although the post will be based at thejewellery company's London branch opened three years ago.

The recruit will be the corporate director leading a team of three people in marketing Tiffany's products to companies as incentive or long-service awards to staff or as gifts to customers. Responsibility is to Mrs Rosamond Monckton, head of the British operation.

Since the prime task is identifying new business opportunities, the job calls for particular abilities in the creative aspects of marketing products of high quality and value. But merchandising and leadership skills are also wanted, as of course are good contacts with top managers of companies in Britain.

Again no salary is quoted. My estimate would be about £30,000 with other benefits negotiable.

Inquiries to Brad Harvey, personnel manager, 25 Old Bond St, London W1X 3AA; tel 01-409 2790, fax 01-491 3110.

Kuwait

NOW to Kuwait City where an Arab bank is seeking two foreign exchange specialists through the agency of British headhunter Dudley Edmunds of the Roger Parker Organisation. The key task for both recruits is to expand the bank's fx trading activities.

Being unable to name his client, he promises to abide by applicants' requests not to be identified to the employer at this stage. The same goes for the other recruiter to be mentioned later.

The more senior of the two newcomers will head the trading section and, as well as personally handling spot and forward transactions in both interbank and corporate spheres of business, will be much involved in the training of supporting staff.

Candidates for the section head's post should have at least seven years success in fx trading – the more broadly based, the better – including experience in a managerial role.

The second recruit will work as deputy to the first, and will need management experience as well as a minimum of four years fx trading.

In both cases the salary will be tax-free. The indicator for the section head is US$120,000, and for the senior trader US$90,000. Perks will include housing allowance.

Inquiries to Mr Edmunds at 231 Shoreditch High St., London E1 6PJ; tel 01-247 7632, fax 01-247 1411.

City

MEANWHILE, back in London, recruiter Roy Webb of the Devonshire Executive consultancy seeks a senior manager to direct and control the corporate finance operations of a British commercial and investment bank. Main responsibilities of the job will be to advise on mergers and acquisitions, defences, and buy-outs.

Candidates should already be high-level managers of similar work in a merchant bank, and be well versed in Stock Exchange regulations.

Salary indicator is £70,000, with performance bonus, car and mortgage subsidy among other benefits.

Inquiries to Mr Webb, 8th Floor, 7 Birchin Lane, London EC3V 9BY; tel 01-895 8050, fax 01-626 2092.

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We are now looking to strengthen our small UK team through the appointment of two experienced financial executives. You are a qualified Accountant in your late 20's/early 30's, with at least 5 years' post-qualification commercial or industrial experience and a good academic track record. Empathy with fast-growing technology businesses and strong inter-personal skills are essential.

Your role will be to work with your colleagues in the financial appraisal, structuring and subsequent management of potential investments. You'll liaise with other syndicate members, be involved in a wide range of due diligence issues and assist companies with their financial plans and strategies.

The rewards will reflect your experience and potential. Salary is negotiable and a generous benefits package is offered. If you are ready for this exciting challenge please send your C.V. to Kathleen Rawle, Personnel Manager, 3i plc, 91 Waterloo Road, London SE1 8XP.

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Probably in your thirties, you will be either a qualified accountant or banker (AIB) with sound experience of commercial property finance. Ideally you will also have a successful track record of preparing credit committee proposals. You should possess a flexible, enthusiastic approach with good team spirit. Excellent communication skills and the ability to work effectively in a small team are essential to your success.

Please reply to Christopher Evans in strict confidence with details of age, career and salary progression, education and qualifications, quoting reference 5204/FT on both envelope and letter.

Deloitte Haskins+Sells
Management Consultancy Division
P.O. Box 198, Hillgate House, 26 Old Bailey, London EC4M 7PL

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Various positions ranging in requirements for Bond sales people with several different clients. One to suite your experience.

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電話：01-236-1090　担当者：JULIA STEAD

IBJ International Limited Bucklersbury House, 3 Queen Victoria Street, London EC4N 8HR.

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If you are interested in the above position please telephone Ian Matheson on 01-236 1090 or write to him at:

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The successful applicant should be a graduate, preferably a business school graduate with at least 4 to 5 years' experience and have competence in financial modelling. An interest in or exposure to the broadcasting and telecommunications sectors or a technological orientation would be helpful though not mandatory. Enterprising consultants from the Communications industry may be well qualified.

The substantial remuneration package includes mortgage subsidy, non-contributory pension and private medical insurance schemes.

Applicants should write, enclosing their CV, to: Jo Heigho, Assistant Director – Personnel, J. Henry Schroder Wagg & Co. Limited, 120 Cheapside, London EC2V 6DS.

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Jonathan Wren Executive

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As financial conglomerates compete for supremacy in expanding global markets, as equities are traded instantaneously on screens and money flows around the world faster than ever before, participants in these markets need to review regularly their career aspirations. As the premier recruitment consultancy in the City, Jonathan Wren has the experience, expertise and market contacts to be highly effective in placing individuals in positions which ideally complement both career aspirations and financial expectations.

We are currently assisting a reputable US stockbroker in their recruitment of the following:-

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A minimum of two years experience is required covering the European 'Financials' sector. Fluency in a European language would be advantageous.

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Contact Ann Winder on 01-623-1266

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in addition to an attractive salary a generous company car allowance will be included with the usual banking benefits relevant to this important appointment.

Applications in confidence, including a full CV, should be sent to: Marc Hoodless, Personnel Manager, One Mitre Square, London, EC3A 5AN.

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Please write in confidence, enclosing curriculum vitae to:

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Francis Allison Symes Ltd
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International Appointments Also Appear on Page 9

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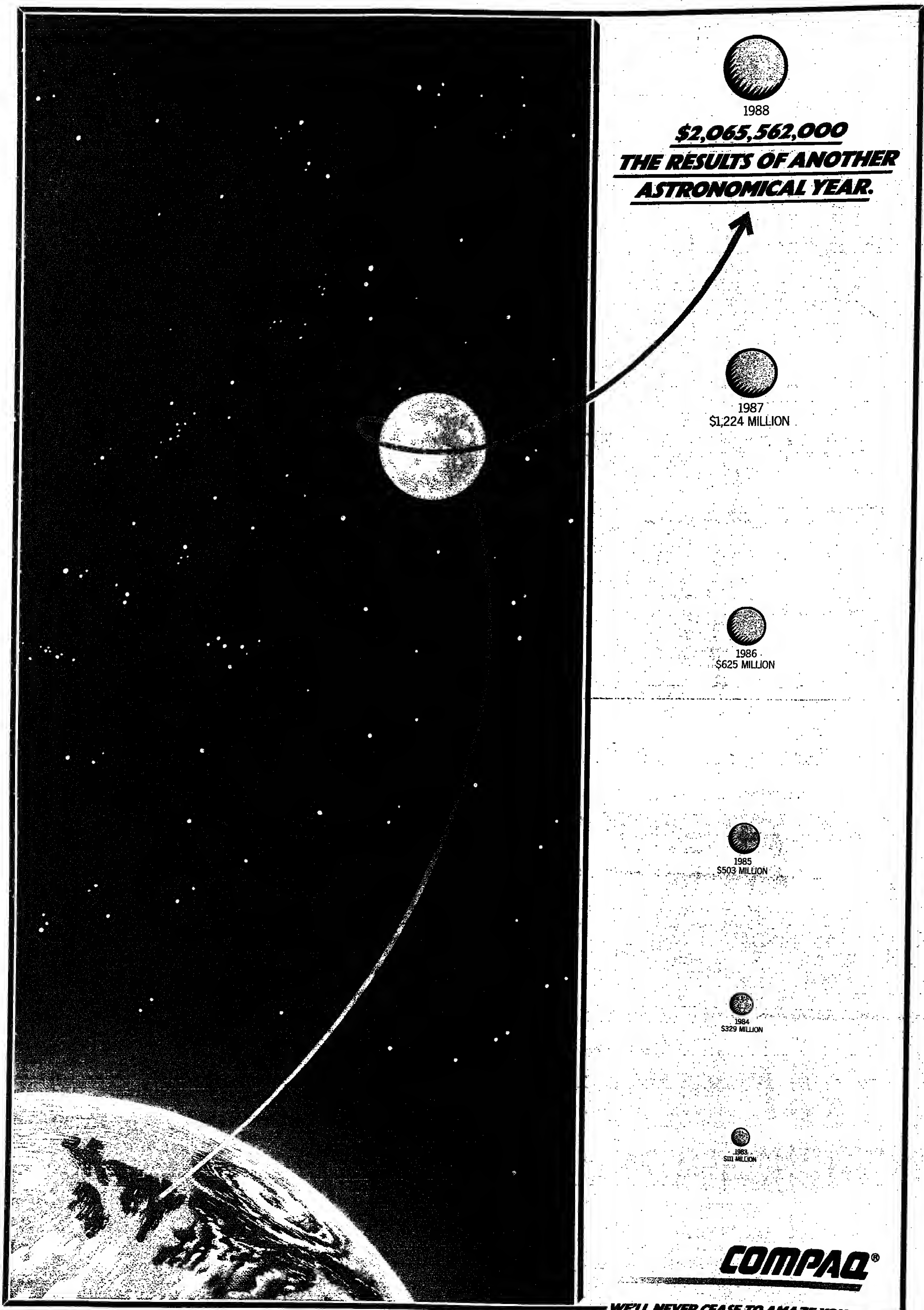
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FT LAW REPORTS

Evidence can be taken for Norwegian court

RE STATE OF NORWAY'S APPLICATION (No 1 and No 2)
House of Lords (Lord Keith of Kinkel, Lord Brandon of Oakbrook, Lord Griffiths, Lord Goff of Chieveley and Lord Lowry): February 9 1989

THE ENGLISH court's power to comply with letters rogatory issued by foreign court requesting the examination of witnesses in civil or commercial proceedings applies to tax proceedings, in that "civil" bears its English law meaning and includes all non-criminal matters.

The House of Lords so held when allowing an appeal by the State of Norway and the estate of Mr Anders Jahre, from a Court of Appeal decision (*Norway 2 [1988] 1 FTLR 293*) that the English court had no power to comply with their request for an order that Lord Kindersley and Mr A.J. Hardman should give evidence for Norwegian tax proceedings.

The Evidence (Proceedings in Other Jurisdictions) Act 1975 provides: "1. Where an application is made to the High Court . . . for an order for evidence to be obtained in the . . . United Kingdom . . . and the court is satisfied . . . (b) that the evidence . . . is to be obtained for the purpose of civil proceedings . . . before the requesting court . . . 2(1) . . . the High Court shall . . . have power . . . to make such provision for obtaining evidence . . . as may appear appropriate."

Section 9(1): " . . . 'civil proceedings' . . . mean proceedings in any civil or commercial matter . . ."

LORD GOFF said that in 1983 a retrospective tax assessment was raised in Norway against the state of deceased shipowner, Mr Anders Jahre, on the ground that he had failed to declare a large part of his assets.

The undeclared assets were alleged to include the assets of Panamanian company, Continental Trust Co (CTC), whose shares formed part of the assets of a charitable trust. It was alleged that Mr Jahre was a settlor or in control of the trust, and was accordingly beneficial owner of the CTC assets.

In November 1983 the estate brought an action in the Sandefjord City court, to have the assessment set aside. Letters rogatory were issued by the court, addressed to the English High Court, requesting the oral examination of two witnesses in the UK, Lord Kindersley and Mr A.J. Hardman.

Lord Kindersley was a director of Lazards who acted as adviser to the trust. Mr Hardman was a senior employee of Lazards who acted as assistant secretary and subsequently treasurer to CTC, until its dissolution in 1984.

The letter of request formed the basis of the first set of proceedings in the UK (*Norway 1 [1986] 1 FTLR 507*).

On January 14 1985 an *ex parte* order, requested by the State of Norway, was made for examination of the witnesses. Mr Justice McNeill dismissed the witnesses' application to discharge the order. The Court of Appeal allowed their appeal on the ground that the letter of request was in such wide terms that it amounted to a "fishing expedition" for information.

The Sandefjord court addressed a second letter of request to the English court, again seeking the testimony of Lord Kindersley and Mr Hardman, but limited to specific issues and specific questions.

It led to UK proceedings in *Norway 2*. The application for the order was made by the State of Norway, supported by the estate.

The order was made *ex parte*. The witnesses applied to have it set aside. Mr Justice Kenneth Jones dismissed their application, subject to certain qualifications on the testimony they were required to give. The Court of Appeal allowed their appeal. The majority did so on the ground that the court had no jurisdiction to entertain the request within section 1(b) of the Evidence (Proceedings in Other Jurisdictions) Act 1975.

The State of Norway and the estate now appealed.

The central question was whether the proceedings in the Sandefjord court were civil proceedings within section 1(b) of the 1975 Act, having regard to section 9(1) which defined "civil proceedings" as "proceedings in any civil or commercial matter". A major purpose of the 1975 Act was to ratify the Convention on the Taking of Evidence Abroad in Civil or Commercial Matters 1970. The text of the Convention was in English and French.

Article 1 provided that "In civil or commercial matters" a judicial authority of one contracting state might request the competent authority of another to obtain evidence.

In the French text, article 1 opened with "*En matiere civile ou commerciale* . . ."

Tha witnesses submitted that "civil or commercial matters" in section 9(1) of the Act should reflect tha words in article 1 of the Convention and be given the same meaning, and should be regarded as derived from "*matiere civile ou commerciale*". In France, as in other civil law countries, civil matters were limited to private law, and excluded public law and fiscal matters. That approach was commended by the witnesses as "internationalist". It was suggested it would achieve uniformity in construction.

In *Norway 1* that approach was rejected, but it found favour with the majority of the Court of Appeal in *Norway 2*.

In considering the scope of the jurisdiction conferred by the 1975 Act, it was legitimate and appropriate to have regard to the legislative history.

The first Act of Parliament concerned with the obtaining of evidence for the assistance of foreign court was the Foreign Tribunals Evidence Act 1856. There "civil matter" was given no restricted meaning and was understood in the UK as referring to civil as opposed to criminal proceedings. The same classification was applied in subsequent acts relating to the obtaining of evidence, and to extradition.

The witnesses' argument would involve a profound departure from the established legal practice of conferring a very broad jurisdiction on UK courts for obtaining evidence for courts in other jurisdictions. There was no hint in the 1975 Act that any such departure was intended.

The jurisdiction under the Act could be invoked to obtain evidence for assistance of a court in another jurisdiction in the UK. It was improbable that Parliament should have limited the jurisdiction to proceedings in a civil or commercial matter in a sense understood in civil law countries. Also, it would be strange if the jurisdiction of commonwealth countries, or non-convention countries should now be limited with reference to the law of civil law countries.

Study of comparative law material revealed that it was very difficult to attribute any uniform meaning to "*matiere civile ou commerciale*" or "civil or commercial matter" in civil law countries. The identification of public law matters differed from country to country.

The words "civil or commercial matters" in the 1975 Act could not be construed with reference to any internationally acceptable meaning. They should be construed by reference to the systems of law in both the requesting court and the country addressed. Jurisdiction would only be established if the relevant proceedings were proceedings in a civil or commercial matter under the laws of both countries.

In the present case Mr Justice Kenneth Jones concluded that under Norwegian law the proceedings in Norway would be classified as civil. He was entirely justified in reaching that conclusion on the evidence before him.

The witnesses submitted in the alternative that the State of Norway's application should be dismissed as "tax gathering", inconsistent with the principle in *India v Taylor [1955] AC 491*. The principle, as set out in *Dicey and Morris 11th ed p 100* was that English courts had no "jurisdiction" to entertain an action for the direct or indirect enforcement of foreign revenue law.

It was recognised that the theoretical basis of the rule was a matter of controversy. The rule did not go to jurisdiction. What the English court did was to decline in such cases to exercise its jurisdiction.

Letters of request or their execution, could not amount to enforcement, direct or indirect, of foreign revenue law. There was no extraterritorial exercise of sovereign authority in seeking the assistance of UK courts in obtaining evidence which would be used for the enforcement of Norwegian revenue laws in Norway.

The appeal in *Norway 2* was allowed. Argument was heard as to costs in *Norway 1*.

Their Lordships agreed.

For the witnesses: Michael Crystal QC, J.A. Jolowicz and John Higham (Linklaters & Paines)
For the State of Norway: Anthony Boswood QC and Stephen Moriarty (Freshfields)
For the estate: Anthony Boswood QC and Stephen Moriarty (MacFarlanes)

Rachel Davies
Barrister

TECHNOLOGY

Europe develops a nose for wine fraud

Cheating over the origin of wine costs the EC dearly. **Clive Cookson** detects an answer

When you buy a bottle of cheap French red wine, can you be sure that its contents have not been adulterated with even cheaper wine from Italy or Algeria? And when you sip a more expensive white, are you confident that the grower has not helped nature illegally by adding beet or cane sugar to the grape juice before fermentation?

Geographical misrepresentation and illegal enrichment of wine are believed to cost the European Community and its consumers hundreds of millions of pounds a year. Until recently no analytical technique could reliably detect this sort of fraud.

But a new method, developed in France, offers the prospect of more effective regulatory control over the quality and origin not only of wine but of many other drinks and foods. It could, for example, revolutionise the world trade in vanilla, which is plagued by the inability of conventional chemical analysis to distinguish clearly between natural and synthetic vanilla extracts.

The technique is known as SNIF-NMR – standing for site-specific natural isotope fractionation by nuclear magnetic resonance. It was invented by Gérard Martin, a chemistry professor at the University of Nantes, and is being commercialised by Eurofins, a company headed by his son Gilles Martin.

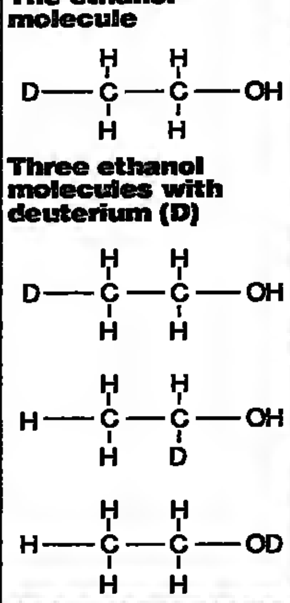
Last year the EC officially adopted SNIF as the preferred method for controlling the addition of sugar to musts (grape juice before fermentation). This process, called chaptalisation, is either forbidden or strictly regulated in all wine-growing areas. The national wine authorities in France, West Germany and Italy are following the EC lead and establishing SNIF laboratories in Montpelier, Speyer and Verona respectively.

Nuclear magnetic resonance (NMR) originated as a spectroscopic method by which chemists analysed the structure of molecules. It is most familiar as a means of detecting cancer and other diseases by computerised scanning of body tissue. SNIF takes NMR into a lucrative new field.

NMR relies on the fact that some atomic nuclei behave like tiny magnets. When they are placed in a strong magnetic field they align themselves with it. If the nuclei are then bombarded with a pulse of high-frequency radio waves, they will be pushed out of alignment. When the pulse is finished, the nuclei settle back into line and in the process emit their own radio waves, which can be picked up by a receiver. Each atom has its own radio frequency, rather like a tuning fork resonating to a particular note.

The ethanol molecule

Three ethanol molecules with deuterium (D)



SNIF uses NMR to measure the extent to which the hydrogen in certain natural molecules has been replaced by its isotope denterium. Whereas the nncleus of an ordinary hydrogen atom consists simply of a proton, deuterium has a neutron bound to the proton and is therefore twice as heavy as hydrogen. Physical, chemical and biological processes enrich some matarials with deuterium and deplete others.

Because the Earth's rotation forces deuterium towards the equator, the amount of the isotope present in a naturally grown product, such as wine, can be used to determine geographic origin. The nearer to the equator the grape is grown, the more deuterium it contains.

The deuterium will typically get into the grape via rain-water (or snow). Its concentrations in this source vary from 90 parts per million (ppm) near the South Pole to 160 ppm in the tropics. The effect of latitude is reinforced by the fact that grapes incorporate more deuterium when they grow in hot dry conditions than in cool wet weather. As a result, the amount of deuterium in wine alcohol varies by more than five per cent between southern Italy and Germany.

These differences can be detected by NMR machines. But what makes SNIF such a powerful technique is that it gives not only the overall deuterium concentration but also the amount incorporated into specific molecular sites.

Take the ethanol (common alcohol) molecule. As the diagram shows, there are three sites where deuterium (D) can replace hydrogen (H). It could take the place of any of the three hydrogens attached to the first carbon (C) atom, either of the two hydrogens on the second carbon, or the hydrogen attached to the oxygen (O) atom. If deuterium were distributed statistically between the three sites, the proportions would be 3:2:1. In fact they vary considerably, according to tha biochemical processes by which sugar forms in the growing grapes and is then converted to ethanol during fermentation.

SNIF uses NMR machines, made by Bruker of West Germany, to measure the amount of denterium at each site. These figures show whether all the ethanol originated from grape sugar or whether some came from added beet or cane sugar, and they will give a good indication of where the grapes grew. The method is expensive – an analysis of one wine sample costs about £140. Gilles Martin expects that to come down to £40 within four years.

Analysts at laboratories such as Harwell in England have used other analytical techniques, notably mass spectrometry, to measure the ratios of different isotopes in wine – carbon-13 to carbon-12 and oxygen-18 to oxygen-16. These do not distinguish as clearly as SNIF between wines of different origins but their results can be added to the SNIF figures to give a potent method of wine identification.

"The most important thing now is to build up an extensive database showing the characteristics of wine from all the important growing regions, so that the laboratories using SNIF-NMR will have a reliable basis of comparison," says Gilles Martin. His company, Eurofins, is building np a worldwide data bank; the EC laboratory in Ispra, Italy, plans to cover the whole of Europe; and the West German, French and Italian authorities will do the same for their countries.

"For some regions such as Cognac we already have a very good database," Martin says. "We can tell without doubt whether a brandy comes from Cognac or somewhere else."

SNIF has also been used to identify the alcohol – and hence any fraud – in other drinks. For example, it could tell whether a particular whisky was a genuine blend of Scotch malts or whether some or all of it originated in southern Europe or the Far East.

The same NMR technique can measure the amount of deuterium at specific sites in more complex natural molecules. With perfumes and flavourings, SNIF can detect the difference between natural extracts and the much cheaper synthetic chemical varieties. Vanilla is a good example. The quantity of "natural vanilla extract" sold worldwide is several times greater than the amount actually produced, because synthetic vanilla (costing $15 per kg to produce) is passed off as the real thing (priced at $10,000 per kg).

When scientists developed a way of distinguishing the two, by measuring the carbon-13 to carbon-12 ratio, producers of synthetic vanilla fooled the test by enriching their material with carbon-13. It would be impractical for them to get round a SNIF test by adjusting the deuterium ratio at every site on the vanillin molecule.

UN sets up biotech centre to help developing countries

By Thomas Land

AFTER several years of organisation and debate, the United Nations' International Centre for Genetic Engineering and Biotechnology is about to start work.

It has been established to seek practical solutions to a series of stubborn problems perpetuating hunger and disease in the developing world. Set up by the UN's Industrial Development Organisation (Unido), the primary centres are in Trieste and Delhi, and affiliated technological research institutes are being established in other countries.

At Trieste, three research groups are working on DNA replication, virology, and the conversion and upgrading of biomass (biological matter). The studies of its affiliates range from diagnostics and enzyme engineering to food fermentation.

Work at Delhi is also organised under three scientific groups covering malaria, hepatitis and plant biology. Collaborations with affiliated centres include research into nitrogen fixation, a hepatitis B vaccine and pollen propagation.

Forty countries have representatives on the preparatory committee which will support the centre during a three-year start-up phase. Funds for the programme inclnde a $10m contribntion from the Italian Government plns $7m raised by Trieste. India has made a contribution worth $17m.

The aim is to run an international centre of excellence, concentrating on problems which hamper the developing world but tend to be neglected because of commercial considerations.

It is envisaged that the affiliated centres being set up in developing countries – such as Argentina, China and Nigeria – will act as focal points in nascent, local scientific networks.

Medicine and agriculture are likely to be the greatest beneficiaries from the bio-revolution, which is expected to raise health and nutritional standards, incomes and output, concludes a study published by the UN Labour Organisation.

For example, a third of the world's food potential is now lost to insects, diseases and weeds. The loss is as high as 40 per cent in Africa. New, resistant plants will soon reduce this loss considerably. Eventually there could be "super-crops" which shrug off diseases and pests without the aid of fertilisers or pesticides.

The pace of change may well accelerate as advanced biotechnology provides industrial means for the insertion of foreign genes into cells, circumventing conventional barriers of genetic incompatibility and creating varieties with new characteristics and functions.

Specialists reckon that the influence of genetic engineering and biotechnology on the production of grain, fruit and vegetables will extend to 20 per cent of the global market by the mid-1990s.

The escalation of investment in biotechnology began over a decade ago. The US, Japan and West Germany have been the leaders in spending, but the impetus has also been evident in Britain, Canada, France, Switzerland and New Zealand.

Saran Narang, a molecular biologist with the Canadian National Research Council, who first proposed the establishment of the UN centre, explains: "If the developing countries do not start to bridge the gap today, in 10 years' time it will be impossible. They must either get in now and start to understand how to use this knowledge to their benefit or wait for the industrialised countries to develop this technology – and then buy it."

Directing businesses towards the right line of computerised inquiry

By Paul Abrahams

A DIRECTORY of international sources of business information has been published in the UK. Its aim is to assist business researchers and analysts to locate sources of information in Europe, North America and the Far East.

The directory* is the first to contain a detailed description of on-line (available over a telephone line) databases in all 12 countries of the European Community. The author, Sarah Ball, a consultant at Coopers & Lybrand in London, believes that the book will prove of particular interest to companies preparing for the European single market after 1992.

Ball says that there is considerable ignorance in Europe about the extent of such services. In 1980, there were only 221 on-line databases in the world, whereas now there are more than 1,800.

"Managers in the US have tended to be much more in tune with the extent of information which has been made available through the expansion of on-line detabases. In Europe, information has been seen as the prerogative of the librarian."

The range of information is impressive, she says. "National and international databases now exist which provide detailed information abont international companies in a large number of sectors. These can be used not only to target possible merger and acquisition candidates; but also to identify credit-worthy suppliers and customers."

Other services accessible through computers include a database providing details about EC projects and regional benefits. Such information is often available on-line well before it is published in official journals. Details about trade fairs in the UK and on the Continent can also be accessed.

However, Ball does issue a few caveats. For example, the quality of data is dependent on the accounting methods in different countries and influenced by the reasons for the data's publication. Gaining access to the information may be easier than it was, but it still needs to be interpreted.

* *The Directory of International Sources of Business Information, published by Pitman, telephone 01 379 7383.*

Les Présages: the final movement

Les Présages

PARIS OPERA

"Who would have thought to see *Les Présages* after all these years?" So we said on Friday night: former members of de Basil's Ballet Russe, who recalled Massine's first symphonic ballet in its great days; critics with memories only of the ghost of the ballet that de Basil brought back to London in 1947; newcomers to whom this key work of the 1930s was but a legend. But there it was on the Opéra stage, vividly restored by Tatiana Leskova, a ballerina with de Basil whose memory and understanding had made the revival possible.

There, fired by the emotions of Chaikovsky's fifth symphony, was André Masson's turbulent backdrop, with its star shapes and comets and roar of colours. There, rather less impressive, were the costumes, looking dated, and wearing them were the ballerina dancing Action, the two lovers representing Passion, Fate with his bat's wings and Tin Man of Oz hat, Frivolity in blue tulle, and a corps de ballet sometimes outfitted with balaclava helmets like mad soldiery, all caught up in Massine's expressionist commentary upon man and his destiny.

But most important, there was the convincing text of a major creation by a major choreographer whose work has fallen into disrepair, and, if American Ballet Theatre's horrific view of *Gaîté Parisienne* is anything to go by, into disrepute. Unlike ABT, busily rouging the cheeks of a corpse, the Paris Opéra and Mme Leskova have restored a significant ballet to theatrical order.

First given in 1933, *Les Présages* was a huge success that caught public attention and persuaded audiences that the revived Ballet Russe was again an artistic force. Massine's use of a Chaikovsky symphony created a sensation, as his movement poured in exultant waves over the stage. So did the new stars of the company: Nina Verchinina, with Central European training, as Action; David Lichine as the Young Man, with the astonishing 14 year old Baronova as the Woman; the young Riabouchinska, so light and delicate as Frivolity; the dominant Woidzikovski as Fate.

If I mention these illustrious dancers it is because their emotional power as performers is the one element as yet lacking in the fine interpretations of the present Opéra casts. I missed a certain identification with the spiritual ideals that fired Massine's movement, an intensity of belief that must form and impel its richness of gesture. For this is a very Russian work, replete with "meaning" extrapolated from Chaikovsky's own emotionalism. Its links are also with a Russian past, with the ballets of Alexander Gorsky, choreographer in Moscow when Massine was still a young dancer there, whose setting of Glazunov's fifth symphony in 1915 is an earlier example of this style of "music realisation." The extra fascination in this first of the five symphonic ballets with which Massine dominated balletic awareness in the 1930s, is in seeing how it did in fact presage events that led up to the holocaust of 1939. The Opéra's cast, which I saw twice, is dazzling in physical skill, but alone of the principals, Charles Jude as the Young Man found the allure and density of feeling that the Massine style demands if it is to make complete sense. Musically, the performance by the orchestra under Michel Tabachnik was excellent.

The revival of *Présages* is of real historic importance, and it is the first part of an intelligent programme dedicated to the idea of plotless choreography. In a fascinating article in the current issue of the American magazine *Ballet Review*, Diana Gould Menuhin writes about working with Balanchine in his short-lived Ballets 1933. "Massine's tradition lies in a direct descent from the *Esmeraldas* and *Corsaires*, whereas Balanchine marked the beginning of a completely new vision of dance. He was the future; Massine was the final flower of the past." Lady Menuhin's perceptive comment was the implicit message of the rest of this programme.

A quarter-century separated *Les Présages* from Balanchine's *Agon*, but those 25 years saw the the death of the Ballet Russe ideal and the making of classic ballet as an American art. *Agon* is light years away from Massine's creation, rejecting all its emotionalism, taking the academic vocabulary far into the future. (It still looks more modern than most choreography made since it was first staged). At the Opéra it was strongly cast, with Elisabeth Platel and Jean-Yves Lormeau musical, pure in the pas de deux. And for the final up-dating of the avening, we were given two pieces by Twyla Tharp: *As Times Goes By*, made in 1973 for the Joffrey Ballet, and the hrand new *Rules of the Game*.

A recurrent theme in Miss Tharp's choreography is dancing held on a knife edge between disorder and disciplined freedom. In the earlier piece the choreography explores various links between the classic manner and more popular idioms, between the individual an the group, and as tha last two movements of Haydn's "Farewell" symphony move to their tapered close, the dance remains limber while yet pinning its faith upon academic rigour. With hideous dun costumes, the piece was admirably danced, its cast led by Monique Loudières and Jean-Christophe Paré.

The new work, with Bach music skilfully arranged and re-worked by Michel Colombier, has design by Gilles Dufour which offers a front-cloth that is the theatre's own curtain fractured by lines and cracks. It aptly reflects Miss Tharp's theme of tradition fragmented without being destroyed. The rules of the classic dance game are bent but not broken, as steps are taken to absurd lengths, or deformed and re-shaped, and energy pushes at the confines of discipline. Jokes and ambiguities abound, magnificently displayed by Isabelle Guérin, Manuel Legris, Carole Arbo and the brilliant Lionel Delanoe. It makes an ebullient end to a thought-provoking evening.

Clement Crisp

TELEVISION

Living with the Bomb

ITV is two thirds of the way through the most extraordinary and terrifying true story ever told: a story which has yet to end but which has its roots in the bellicosity of Hitler, Mussolini and Hirohito, and its newest shoots in the glasnost of Mikhail Gorbachev. The subject is, of course, The Bomb and the series which is a co-production between Central Television in Britain, WGBH Boston, and NHK in Japan, is called *The Nuclear Age*.

It is confirming what we have learned from a few other superb documentary series (*The World At War* and *All Our Working Lives* for instance): that when it comes to the history of living memory – history within the period of the film camera – nothing can match television. Monday saw the transmission of the eighth episode, "Haves And Have Nots," which opened with some astounding footage of Chinese cavalry in the 1950s training to survive on a nuclear battlefield, with both riders and horses in outsize gas-masks.

As with every other episode in this 12-part series, the programme brought to the screen speakers who played central rôles in the events described: in this instance Chinese, Pakistani and Indian politicians, as well as the Americans and – most impressively – the Russians whose comments are spread through the series from beginning to end. And like every other episode, this one contained numerous facts that were news to me and, I would guess, to 99 out of 100 other viewers.

If a production of this size, importance, and expertise were to appear in any medium outside broadcasting (assuming for a moment that theatre or cinema or any other medium was able to handle so much diverse material, which is highly doubtful) it would receive endless attention from the chattering classes. If it were a book you would not be able to move for thousand-word reviews in the quality press. But because it is a television production, this is almost certainly the only decent sized review that the series will receive from a national newspaper.

Yet the story being told is unique. It began with the Manhattan Project, the development of the first A-bombs, and the destruction of Hiroshima and Nagasaki. Episode 2 took us through the Truman years, into the beginning of the cold war, past the Fuchs spy scandal and up to the point where, to the horror of the Americans, the Russians tested a nuclear weapon. Episode 3 described the Eisenhower era with its policy of "massive retaliation," and moved into the Khrushchev/Kennedy years.

Episode 4 switched to the European theatre and considered Britain's development of nuclear capability, the effects of Suez upon French thinking, the Hungarian uprising, and the beginnings of CND. The fifth episode covered a subject much aired before on television, the Cuban missile crisis of 1962, but did so outstandingly well. Were you aware that John Kennedy hid a tape-recorder under the table for his Cuban crisis committee meetings? We heard some of the tapes.

Episode 6 was even better: it analysed and explained very clearly the way in which the thinking of Robert McNamara, a former Ford Motor Company executive, changed during his term of office as US Defence Secretary. He began as a gung-ho believer in the use of nuclear weapons, and ended up insisting "Nuclear warheads are not weapons. They have no military use whatsoever."

US Marines watch the Atomic Energy Commission's exercises in Nevada during the early 1950s

In Episode 7 we were taken through the Nixon/Brezhnev years, Kissinger's shuttle diplomacy, America's sudden love affair with China, détente, SALT I, and all the way up to Watergate – the history of nuclear weapons being inseparable from other aspects of political history.

This week's programme on the international proliferation of nuclear capability is followed next week in Episode 9 by an account of the Carter presidency when conciliation seemed to be the order of the day, yet defence spending went up and SALT II broke down. Episode 10 deals with Pershing and Cruise missiles being sent to Europe; and Episode 11 brings us into the Gorbachev/Reagan era, showing how America's most belligerent president for years became the one to agree to the Zero Option. The twelfth and final episode, I am told, is concerned with Star Wars and the hopes for arms control in the future.

That is what the series is about: a vast undertaking which must have occupied senior producers Julian Ware (in Britain) and Elizabeth Deane (in the USA) and their teams of researchers and archivists for literally years. Since the subject is the history of our own lifetime, and since our own continued existence and the survival of our children depends upon the outcome of the story, it is, by its very nature, pretty compelling stuff. Yet it must be admitted, a little shamefully, that the subject matter alone might not keep one watching through 12 hours. It is the way the story is told that achieves that.

Episode 1 opened with that explosion, "brighter than a thousand suns," in the summer of 1945, which, said Robert Oppenheimer, leader of America's A-bomb project, put him in mind of the words from the Bhagavad Gita: "Now I am become death, the destroyer of worlds." Perhaps he really did think that at the time, but the programme cleverly revealed the more general and much less anxious feeling among other physicists in 1945: with their friends dying on European and Pacific battlefields, it was their duty to use their expertise to make a war-winning weapon.

One of the great strengths of *The Nuclear Age* is that it cuts right through the received wisdom and the hindsight of more recent years to remind us of how people felt and what they said at the time, and until you understand the mood of the time you cannot understand history. Nothing brings that mood alive so quickly as the quality of the human voice. The newsreel commentator who said, over pictures of American weapons shipped to Britain "Great big beautiful bombs for hitting Hitler where it hurts!" spoke with a chillingly merry jingoism which told you as much about the public mood leading to the ready acceptance of nuclear weapons as entire chapters of analysis in a book.

Repeatedly in the early programmes the camera mixed-through from a black and white still of a youngish man to colour film of an older but oddly similar face. Here were the people actually involved in the birth of nuclear power speaking to us of their experience, and often the accents (even today) were central European. When the Nazis put the Jewish intellectuals to flight, they provided America with much of the brain power needed to construct an atom bomb.

This is very much an international series, not simply in its financing, nor in the diverse origin of its archive material, nor even in its unprecedented access to Russian opinions (though being able to hear from Russian politicians and military men, sometimes confirming American analysis of past events, sometimes contradicting it, is immensely valuable) but in its journalistic stance. It provides scant comfort for Little Englanders since the UK is seen to be remarkably insignificant in the 50 year history of the bomb, whatever Britain's "special" relationship with the USA, and the supposed importance of British Polaris submarines.

Given the nationalistic bombast which characterises most history lessons anywhere in the world, it is wonderfully encouraging to find television beginning to develop this multi-national approach to modern history, even if it is driven by economic necessity. The question is: will ITV ever again make such a series and screen it at 10.35 on a weekday evening? If the Government's White Paper on broadcasting becomes law, and ITV franchises are auctioned to the highest bidder, it seems extremely unlikely.

That will not matter greatly if such a series can still be made for some other channel, whether BBC2 or Channel 4, or Channel 44 come to that. But since the cost of *The Nuclear Age* must be closer to millions than thousands of pounds, that, too, looks highly doubtful. It could be that the production of such high quality television history will turn out to have been a flash in the pan, beginning with *The World At War* in 1973 and ending with *The Nuclear Age* in 1989. Let us hope not.

Christopher Dunkley

Over My Dead Body

SAVOY THEATRE

We are in a book-lined library. Enter a tottering butler, with an equally tottering tray. Welcome back whodunnit land. But these days no one dares to present a serious attack on the done-to-death genre, only a spoof, and Michael Sutton and Anthony Fingleton have gone for gold by presenting the ultimate spoof thriller.

The library is the hub of the Murder League, a club for detective writers. Three old lags, doyens of the locked-room murder mystery, are lamenting the passing of their glory. Everyone wants realistic psychological crimes these days. By sleight of mouth they almost convince us that if they can actually commit a murder in the tradition of John Dickson Carr the public will re-discover their taste for the good old crimes, for baroque entertainment. And what's a few years in gaol compared with a place on the bestseller list?

It all sounds pretty dire but is actually quite a wacky little piece, saved by its stars and an almost surrealist chain of misadventure. Donald Sinden is first murderer, and looks quite at home in his velvet jacket and cravat. The creator of a one-legged midget detective, he can still invest even the most *humdrum phrase with possibility*.

June Whitfield, the thrill of his life, and Frank Middlemass, are also stage-holding performers, and by the end you could indulge in fantasies of a new comic trio, so well do they play off each other.

More by luck than judgement these old friends of "Dotty" Sayers actually manage their murder: the victim being comprehensively hung, skewered, and shot, while dressed as a gorilla. But his twists on the rope hardly compare with the convulsions of the plot. So bizarre, yet so solidly structured is it all, that you can imagine it as a vehicle for tha Young Ones or any other troupe of off-beat comedians, who can take an outlandish idea and yet, through their energy, manage to drive the audience along with the game.

The play seems to have an American origin which perhaps accounts for the loving seriousness with which the format is treated. Brian Murray directs at a cracking pace and praise for Saul Radomsky's effective design and for Ken Wynne, who manages to get laughs for a butler scarcely matched since Wilfred Lawson.

Over My Dead Body is puerile nonsense, but high quality puerile nonsense.

Antony Thorncroft

The Ghost Sonata

QUEEN ELIZABETH HALL

Strindberg's extraordinary, disquieting "chamber play" has not been seen on the London stage for 60 years. It returns this week in two manifestations under the auspices of Opera Factory London Sinfonietta: tomorrow evening in the Queen Elizabeth Hall the play itself will be staged by David Freeman (and reviewed here by Michael Coveney), while on Monday the company gave the British première of Aribert Reimann's opera *The Ghost Sonata*. The two events will run in tandem for the next two weeks, with 11 performances in all.

As in Reimann's *Lear*, mounted so recently at the Coliseum, the composer and his librettist Uwe Schendel have stuck close to the original stage play for their text. Extraneous naturalistic detail has been trimmed, a couple of characters – The Mummy, The Dark Lady – have been given extra material, and the ending recast with lines reallotted between the Student and the Young Girl, but the atmosphere of overwhelming unreality, in which the living and the dead coalesce, and guilt and bitterness take on concrete form, is preserved.

But it would have been as impossible to reduce *The Ghost Sonata* to mundanity as it would have been for Reimann to deny *Lear* its epic tragedy; in both cases his music neither adds to nor subtracts from what is endemic in the subject matter. At worst it is redundant, at best it can heighten atmosphere just as incidental music can do. The twin vocal modes of *The Ghost Sonata* – tense, clipped recitative, and pinched, high-lying arioso – coupled with the passages of speech over music to which the opera resorts at some of its most chilling moments, are dramatically no more than neutral. One cannot remember a single moment at which the dramatic pulse is quickened or its meaning enhanced by the musical treatment.

The scoring of *The Ghost Sonata* is blessedly light – just twelve players, marvellously alert and well cbaracterised here under Paul Daniel's direction – and Reimann's ear for texture sometimes alights upon some telling sound effects. The interludes between the three acts contain the most memorable music, snaking lyrical lines clothed in dark instrumental colours, and the whole sense of the writing, brittle, thin, often trembling on the edge of catastrophe, is exactly right, even if it is incapable of justifying its existence.

Freeman's production (sets hy David Roger, costumes Lucy Weller) will use the same cast of singers and actors in both works. Singers take the lead in the opera, actors the mute parts, and rôles will be reversed in the play. In a work in which motivations have to be teased out of a web of connections – as Freeman observes in a programme note, the central supper party is the kind of revelatory device which would not be out of lace in an Agatha Christie drama – the setting up of the tensions is the most difficult part.

The music is no help in the first act, but the dislocated series of encounters is vividly caught – after all, this director has had plenty of practice in providing motive and dramatic pace for unpromising scenarios, and here he relishes the chance to burrow into the subtext of a genuine piece of theatre.

The protagonists seem uniformly accomplished. David Aldred's Student Arkenholz, given high-pressured vocal lines by Reimann, needs perhaps the most complex portrayal and is most thoroughly delineated; Richard Suart's Hummel is immensely plausible and ever more reptilian. Christine Botes as both The Dark Lady and The Mummy *who has spent the last 20 years* in a cupboard and believes she is a parrot, squawks and implores with alarming fixity. Helen Charnock makes the most of the singularly rewarding aria given to the Young Girl in the third act; her duet with Arkenholz brings tbe evening to operatic life for the only time.

Shirley Brice, Philip Doghan, Nigel Robson and Peter Sidhom, Opera Factory regulars all, take tbe other singing roles. Caroline Bliss, Jerome Willis, Adam Kotz and Linda Marlowe, the actors, will come into their own tomorrow.

Andrew Clements

ARTS GUIDE

February 17-23

THEATRE

London

The Secret Rapture (Lyttelton). Brilliant new David Hare piece for the National Theatre, a satirical but moving romance on life, love and family politics in Thatcher's Britain. The play of the year. Feb 24, 25, 27, March 9-15, March 25, 27 (928 2252, cc 240 7200).

The Shaughraun (Olivier). Recommended Christmas treat, as Boucicault's melodrama is given the full scenic works but is also revealed as a key Irish dramatic milestone. Fine National Theatre cast led by Stephen Rea. (928 2252). March 1-4.

Brigadoon (Victoria Palace). 1947 Lerner and Loewe "heather-scented" Scottish fairytale hit is handsomely revived and well sung, less frail than expected. (834 1317, cc 836 2428).

Hedda Gabler (Olivier). Juliet Stevenson is energetically wilful in fine National revival using a new Christopher Hampton translation. A full-scale, monumental reading, with European design to match by Bob Crowley. Howard Davies directs, Norman Rodway is Judge Brack. Performances in late March (928 2252).

The Sneeze (Aldwych). Eight short Chekhov pieces — four vaudevilles, four early stories — translated and adapted by Michael Frayn and performed in various styles by Rowan Atkinson, Timothy West and Cheryl Campbell. Slightly rewarding, intermittently funny (836 6404, cc 379 6233).

Orpheus Descending (Haymarket). Triumphant debut for the Peter Hall Company with Vanessa Redgrave candescently sensual and Italianate in atmospheric restoration of Tennessee Williams's last indisputably major play (930 9832).

Henceforward (Vaudeville). Ian McKellen and Jane Asher in bleakly funny and experimental Alan Ayckbourn comedy of future shock and strained marriage. (836 9987, cc 741 9999).

Cats (Winter Garden). Still a sell-out, Trevor Nunn's production of T.S. Eliot's children's poetry set to music is visually startling and choreographically feline (239 6262).

A Chorus Line (Shubert). The longest-running musical in the US has not only supported Joseph Papp's Public Theater for eight years but also updated the musical genre with its back-stage story in which the songs are used as auditions rather than emotions (239 6200).

Les Misérables (Broadway). The magnificent spectacle of Victor Hugo's majestic sweep of history and pathos brings to Broadway lessons in pageantry and drama (239 6200).

Me and My Girl (Marquis). Even if the plot turns on ironic mimicry of Pygmalion, this is no classic, with forgettable songs and dated leadenness in a stage full of characters. It has nevertheless proved to be a durable Broadway hit (947 0033).

M. Butterfly (Eugene O'Neill). The surprise Tony winner for 1988 is a somewhat pretentious and obvious meditation on the true story of the French diplomat whose long-time mistress was a male Chinese spy (246 0220).

Phantom of the Opera (Majestic). Stuffed with Maria Bjornson's gilded sets, Phantom rocks with Andrew Lloyd Webber's haunting melodies in this mega-transfer from London (239 6200).

Marcel Marceau (City Center). Month-long performances by the legendary French mime mark his first appearance in New York in six years. Ends Feb 26 (581 7907).

Rotterdam

Evita (Doelen). Original Broadway production with Florence Lacey. (Mon, Wed, Thur). (413 2490).

New York

Rumours (Broadhurst). Neil Simon's latest comedy is a self-conscious farce, with numerous slamming doors and lots of mugging but hollow humour that misses as often as it hits. Christine Baranski leads an ebullient cast in the inevitable but disappointing hit.

Washington

Steel Magnolias (Kennedy Center Eisenhower). Barbara Rush and June Lockhart star in this view of Southern life through the antics in a hairdressing salon. Ends April 2 (254 3670).

Beggar's Opera (Folger). This eighteenth century view of London low life by John Gay gets inspiration from its Globe Theatre setting. Ends April 9 (546 4000).

Chicago

The Enormous Room (Next Theatre). John Carlile directs his own adaptation of the e.e. cummings novel about internment in the First World War. Ends Mar 26 (475 1875).

Driving Miss Daisy (Briar Street). The touching relationship between a dowager, played in this production by Dorothy Loudon, and her black chauffeur exposes the changes in the South over the past several decades (348 4000).

Steel Magnolias (Royal George). Ann Francis and Marcia Rodd play the leads in this view of southern life from under the dryers in a busy hairdressing establishment (988 9000).

Tokyo

Kabuki. Kabuki-za (541 3131). The matinee performance at 11.30am features four works, including a recent showpiece, *Genji Monogatari*, a tale of the Genji clan. The final play in the evening performance at 4pm is *Megumi no Kenka (The Fight with the M Brigade)*, which features a spectacular and amusing fight between firemen and sumo wrestlers and stars Onoe Kikugoro VII, for whose great-grandfather the play was written. Tickets are available for a single act and the theatre provides informative English-language programmes and earphone commentary.

Bunraku. National Theatre: The World of Chikamatsu. Chikamatsu Monzaemon (1653-1724) is often described as the Shakespeare of Japan; he wrote primarily for the bunraku puppet theatre, helping make it one of the world's most sophisticated art forms. At 11am: *Horikawa Nami no Tsuzumi* (*The Echo of a Drum near the Hori River*), by Chikamatsu. At 3pm and 6pm: plays by Chikamatsu Hai and Yoshida Kanshi (265 7411).

Beneath the Blooming Cherry Trees. Written and directed by Hideki Noda. Seinenkan Hall. Japan's liveliest fringe company, Yume no Yuminsha, is wildly popular among young Japanese and has now built up a substantial international reputation following performances at the Edinburgh and New York Festivals (496 1051).

How to Sleep in Space, Prologue. Kinokuniya Hall, Shinjuku. Popular fringe company Daisan Butai in a revival of a 1981 production set in a nuclear shelter. The survivors take turns in revealing the corruption of their lives (354 0141).

Asinamali. Space Part 3, Shibuya. Anti-apartheid musical, performed in English by the Committed Artists group from South Africa. The title means "We have no money", but its meaning is "We have suffered enough" (477 5858).

"South Bank Brass"

A series of five brass band concerts being held this year at London's Queen Elizabeth Hall started last Sunday, February 19, with the John Foster Black Dyke Mills Band.

The other concerts, which are supported by Boosey & Hawkes, will be on Saturday April 15 (Brighouse & Rastrick); Wednesday June 21 (Britannia Building Society Foden); Sunday September 24 (Grimethorpe Colliery) and Sunday November 12 (Desford Colliery Dowty).

The concerts will feature original music for brass bands by composers such as Malcolm Arnold, Joseph Horovitz, George Lloyd and John McCabe as well as pieces by Weber, Elgar, and Prokofiev.

Further details from (01) 794 5154.

FINANCIAL TIMES
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Freedom for UK savers

THE PRE-BUDGET clamour suggests that the main problem with UK saving is the lack of it. This fuss is a little puzzling, since national savings have remained a fairly stable share of national income throughout the 1980s. When directed at tax changes to be made in the Budget, the fuss is more than puzzling, it is misdirected.

Personal savings have declined as a share of personal disposable income in the 1980s, even though the real rate of return has beeo exceptionally high. This is hardly surprising. A higher average rate of return oo capital makes people richer, the normal response to increased wealth being higher consumptioo, both now and in future.

The main effect of fiscal incentives is not on the level of savings, but on their allocation. Far from encouraging the enterprising, the Government has maintained the relative incentive to investment in owner-occupied housing and pensions, rightly stigmatised by Professors John Kay and Mervyn King, the authors of the standard work on the British tax system, as "civil servants' assets rather than entrepreneurs' assets."

Illiquid wealth

Housing (less mortgages) accounted for 17 per cent of personal wealth in 1957, but this share had more than doubled, to 37 per cent, by 1979 and was much the same in 1987. Meanwhile, pensions and life insurance accounted for 12 per cent of personal wealth in 1957. In 1979, the combined share was still only 13 per cent, but by 1987 it was up to 24 per cent. Thus owner-occupied housing, pensions and life insurance, all illiquid, accounted for 60 per cent of personal wealth in 1987, double their share a generation ago.

The dominance of owner-occupation is a significant obstacle to mobility, especially in the absence of an active market in rental properties. Similarly, company pension schemes are an important disincentive to early leevers. Even personal pensions are a constraint on those with unsettled plans or risky incomes.

If existing fiscal privileges cannot be removed, the Chancellor should make a virtue out of necessity by improving the treatment of currently underprivileged forms of saving. The obvious approach is to put more pep into Personal Equity Plans (PEPs). Rename them Personal Savings Plans (PSPs) and allow everyone to put, say, £5,000 a year into any assets they choose. (A still greater sum should be permitted if the Chancellor simultaneously abolished the Business Expansion Scheme.)

Perfect opportunity

The present tax treatment of PEPs (contributions out of post-tax income, but tax-free accumulation and withdrawal) would presumably be retained. Alternatively, contributioos might be made deductible against tax, though it would then be essential for fiscal neutrality to tax withdrawals (as with pensions today).

The two approaches are equivalent over the long term, except to the extent that people pay income tax at higher rates when saving and at lower rates when withdrawing those savings. With the funds at his disposal, the Chancellor enjoys the perfect opportunity to make the switch, which would leave PSPs exactly equivalent to pension contributions, as long as tax-free lump sums on pensions were eliminated at the same time.

Provided the Chancellor keeps the the £30,000 ceiling on the mortgage interest deduction, which inflation is rapidly eroding, the favourable treatment of owner-occupied housing will also dwindle away. Investment in owner-occupied housing will then be out of taxed income, while returns on housing will be tax free (as at present). This would be precisely the same treatment as with the proposed PSPs (provided their tax treatment were kept the same as for PEPs today).

By taking these relatively simple steps the Chancellor would have gone a very long way towards introducing a neutral treatment of personal investments through what amounts to an expenditure tax. If he preferred not to admit this, he could simply argue that he has at last liberated personal savings from their corporatist chains.

Bid-proofing at the CBI

SINCE the Swiss food groups Suchard and Nestlé vied for control of Rowntree last year there has been mounting concern in British industry and commerce over the ease with which bid-proof foreign companies can eat into the quoted part of Britain's corporate sector. That concern has been heightened by the corporate reshuffling that has taken place as both European and oon-European companies prepare for the completion of the single market.

The Director-General of the Confederation of British Industry, Mr John Banham, is attracted by the argument that all hostile bids from bid-proof predators should be blocked unless there are overwhelming national interests to the contrary. But, if the CBI Council decides today to support this proposal, it would probably be taking a radical and interesting step for all the wrong reasons.

Benign influence

On balance a relatively free market in corporate cootrol has much to commend it in the absence of the performance pressure that banks and other financial institutions impose on companies in parts of continental Europe. And there is no shortage of statistical and anecdotal evidence that the foreigners who control 17 per ceot or more of British manufacturing output have exercised a benign influence on British management practice and productivity.

Where British companies have a legitimate gripe is in feeling that the dice in Europe are loaded against them. Continental European bourses are much smaller in relation to gross national product than the British stock market; companies are also heavily protected against takeover by the structure of ownership, restrictive articles of association and protectionist government policy.

With British acquisitions overseas running at twice the value of foreign purchases in Britain, any demand for bilateral reciprocity would run the risk of retaliation. Yet multilateral efforts have so far achieved only mixed results. While the Swiss authorities are beginning to acknowledge that they cannot expect to go on buying into the Community while offering less open access at home, others – most notably France's President Mitterrand – are determined to protect major domestic companies from foreign control.

Subtle action

Against that background many CBI members will interpret the proposal to refer automatically all hid-proof predators to the Monopolies Commission as a subtle way of achieving reciprocity by the backdoor; subtle, in the sense that even liberal economists would agree that ownership by invulnerable predators should not be allowed to reduce the overall level of competitive pressure in the British corporate sector.

Yet in practice the Monopolies Commission would be unlikely to find many instances where such a reduction in ownership discipline was likely to have a serious impact. For it would have to take into account other financial market pressures for efficient resource allocation, such as the relationship banking systems that have made a notable contribution to post-war economic growth in West Germany and Japan. It would also have to acknowledge the pressure for efficiency in underlying product markets. Nissan may be informally protected from takeover, but inefficient it is not.

Part of the risk in the 1992 process lies precisely in the fact that industrialists seem more excited about the opportunities in the market for corporate control than in underlying product markets. A firm hand is needed from the competition watchdogs to prevent an oligopolistic market carve-up. And here preventing bid-proof companies that operate in uncompetitive markets from making contested bids has something to offer. It could, for example, be applied to British Gas or British Telecom, which are subject to no real ownership discipline and deploy huge cash flows from protected product markets in making acquisitions.

That is the kind of level playing field that is really worth having. If the CBI urges it on the Government, so much the better.

Max Wilkinson examines British Gas's clashes with the industry's regulator

Time of trial for Sir Denis

When British Gas was sold into the private sector just over two years ago, Sir Denis Rooke, its chairman, said it would be run in just the same way as when it was a nationalised industry.

"We will have the same board running the same business . . . ," he said. He was right about the board; that has scarcely changed. But Sir Denis must surely be in danger of an attack of vertigo when he surveys the changes now being forced on the company.

It has been told by the Monopolies Commission to alter radically its method of charging for gas supplied to industry - where high volume users negotiate contracts for their supplies. It has lost its *de facto* position as the sole purchaser of gas from the UK sector of the North Sea. It is being forced to open up its pipelines to competitors, probably on terms which it cannot choose. On top of all this, it is being pushed into a change in its accounting system intended to flush out for the first time the precise allocation of costs and profits in the three separate parts of its gas business.

These changes all end up affecting the company's industrial sector which last year made a profit of £291m, representing about a quarter of total pre-tax profits for the year. Taken together, they add up to a serious threat of competition in this sector – one which, at the time of privatisation, was generally assumed to be a "no-go area" for Mr James McKinnon, director general of the Office of Gas Supply (Ofgas), the industry's regulator.

So what went wrong for British Gas and the millions of people who bought its shares thinking that the gas monopoly would be carried serenely from the state enterprise into the land of private profit?

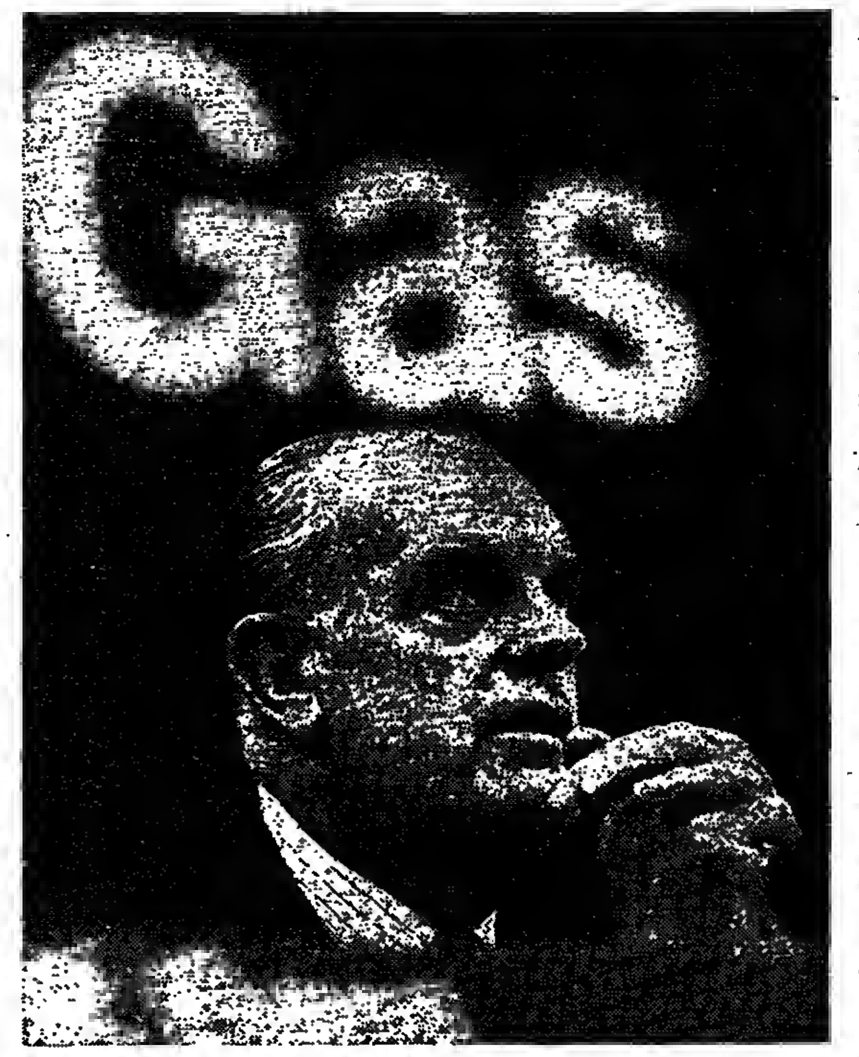
The trouble started only a few months after privatisation when British Gas plc picked a fight with Mr McKinnon, and was promptly knocked down. The issue, which appeared deceptively trivial at the time, was whether Ofgas should be shown the detailed purchase contracts for North Sea gas.

British Gas said the regulator needed only the average cost to check that domestic customers were not being over-charged under the price formula laid down in the Gas Act. After threats of court action, the full figures were produced, and the incident seemed closed. However, this proved to be only the first of what Mr McKinnon describes as "a series of miscalculations" by British Gas about the new and unfamiliar politics of regulation.

The trouble started when the corporation picked a fight with the regulator and was promptly knocked down.

Sir Denis and his colleagues repeatedly failed to realise how tough this Glaswegian accountant was prepared to be. More seriously, they appear to have under-estimated the speed with which puhlic opinion and political influence was swinging hehind the new regulator.

This was hardly surprising because the old puhlic service attitudes are still deeply embedded at British Gas. In 13 years as chairman, Sir Denis has often been cast as champion of the cousumer in historic hattles with Treasury knights against "unwarranted" price rises and other interference. In the past he was armed with an Act of Parliament which vested him with a duty to serve and supply. But the Gas Act of 1986 is quite different. It treats British Gas plc as a profit-maximising monopoly, establishing Ofgas under the general eye of the Monopolies Commission as guardian of the puhlic good.



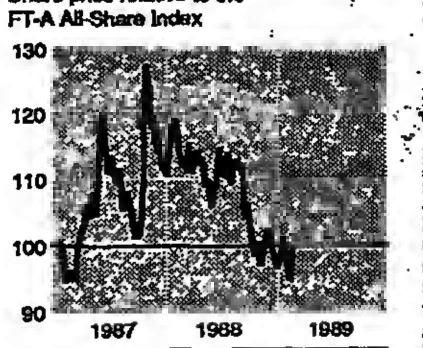
Sir Denis Rooke: deeply identified with the old system

In the battles of the last two years, Mr McKinnon has proved to be at least equal to Sir Denis's legendary toughness, and cooler under fire. With a canny instinct for public relations, he has turned the tables on Sir Denis by citing general provisions of the new Act (like his duty to promote competition) to establish a mnch stronger regulatory regime than many critics had believed possible.

It is important, however, to keep the new pressures in perspective. British Gas derives enormous strength from its licensed monopoly in the "tariff sector" of the market, which accounted for more than 60 per cent of its gas sales and about three quarters of its revenues last year. Price rises for tariff customers – domestic users and about 20 per cent of the industrial and commercial sector – are fixed by a *formula* which allows changes in North Sea gas costs to be passed straight through to the customer. However, the remaining part of the price – reflecting the non-gas costs – must be redoced by 2 per cent per year in real terms. So, if British Gas can keep reducing its costs, revenues from this sector are copper-bottomed, at least until the present formula comes up for revision in three years' time.

Although the opening shots concerned the tariff formula, the main battleground between British Gas and its regulator has been in the contract sector – for customers taking more than 25,000 therms a year. At the time of privatisation, the corporation persuaded the Government that it should be able to charge whatever it liked in this market on the grounds that it was in direct competition with other fuels, including oil, coal, electricity and liquid petroleum gas.

British Gas
Share price relative to the FT-A All-Share Index



However, in 1986 just before British Gas was sold, oil prices had halved, dragging down North Sea gas prices after a few months' delay. The company was required by the tariff formula to pass on the benefit to its domestic customers and it was obliged by competitive pressure to make deep price cuts for those industrial users which could switch to oil.

The company made what now appears a grave mistake in refusing to cut prices to several large captive customers including Sheffield Forgemasters, which complained to the *Office* of Fair Trading. This led to a reference to the Monopolies Commission, which concluded that British Gas had been abusing its monopoly.

The three remedies endorsed hy the commission, which appear to follow Mr McKinnon's suggestions closely, were all designed to encourage competition from rival gas suppliers:

- A requirement that British Gas must publish and adhere to a schedule of prices in the contract market would give competitors a target to shoot at.
- A requirement that detailed pipeline tariffs should be published would ensure that competitors could get gas to their customers.
- A rule that British Gas could buy only 90 per cent of the output from any new gas field would ensure that competitors could get supplies.

Mr McKinnon comes out of all this with strong powers to enforce fair terms for the use of British Gas's pipelines hy a competitor ("common carriage") and to monitor the price structure for industrial customers. Even before the Monopolies report, however, he had been vigorously cheering on the cause of competition.

Just over a year ago he pnhlished a report pointing out that British Gas was charging industrial customers up to 34p per therm compared with its cost of new gas supplies of about 15p to 23p per therm. With pipeline charges around 4p per therm, the potential for profit is obvious.

But the turning point in the relationship between British Gas and Mr McKinnon was at a *meeting* in April 1987. Mr McKinnon demanded detailed figures which would allow him to allocate costs and profits as accurately as possible to the three major parts of the gas business: the tariff sector, the contract market and the pipelines.

This was strongly resisted, partly because information confers power and partly because British Gas did not have the analysis he wanted. It still allocates its costs by the rather general averaging method appropriate to an integrated state monopoly.

Mr McKinnon said he must calculate a detailed breakdown of profits to judge how the price formula should be revised after the allotted five years. If he did not have the data, he would make a guess. Then who would the public believe, him or British Gas? Sir Denis astonished some of his colleagues by clinching the argument in the regulator's favour. He told his colleagues to hand over the figures. The consequences, which are only now becoming evident, could have a profound effect on the way British Gas looks at its business.

The two sides are still arguing over how to construct a system for allocating costs. But British Gas will have little option other than to accept the regulator's view. For in the case of a dispute, Mr McKinnon has power to set charges for the use of British Gas's pipeline on the basis of his, *not* the company's, calculation of its costs and profits. The first test case is now before him and he has a draft direction ready to publish.

In the longer term, Ofgas's view of the internal accounts will also be the major factor in setting domestic gas prices, as Sir Denis recognised almost two years ago. What remains? An industrial sector in which Ofgas will supervise the pricing achedule (though not actual prices) and where the Monopolies Commission has deliberately loaded the dice in favour of would-be competitors to British Gas.

This by no means spells disaster for the company. Mr Bob Evans, the chief executive, emphasises that gas is still a growing market with, for example, 800,000 new central heating systems sold last year. The company, he says, is becoming steadily more efficient and attracting more and more customers.

Nevertheless it is clear that the old order is changing. Some senior people in British Gas doubt whether the oil companies will want to abandon a cosy relationship which gives them fat profits on North Sea gas without the bother of marketing it. Certainly, the oil companies are trying to resist the new 90 per cent rule, but not many people are betting they will succeed. If the Office of Fair Trading forces them to sell only 90 per cent, they will have to compete in the industrial market with the remainder.

One response of British Gas has been to use its strong cash flow to move back into oil and gas exploration, so far with mixed success. It bought a majority in Bow Valley in Canada on rather odd terms at what now seems a high price, failed rather embarrassingly to buy Petrocorp, the New Zealand Gas company, hut snapped up Acre Oil in the North Sea and the oil assets of Houston-based Tenneco for a total of $485m. Then it failed in a dawn raid to take over London and Scottish Marine Oil, the UK independent, despite lengthy talks with its management about a "friendly" bid.

Although this exploration and production business represents only 10 per cent of profits, the company's underlying financial strength could allow it to grow rapidly, but British Gas has not yet decided how it will manage its new portfolio. The Tenneco assets, for example, are still being run by the old Tenneco managers under very general supervision from London.

This raises mnch the greatest uncertainty of all about British Gas – the ability of its top management to adapt to the constraints of the new regulatory world and at the same time to seize the opportunities open to a *private* company. Sir Denis, who is 65 in April, is thought to want to go this year. He is in any case deeply identified with the old system and never cared much for privatisation.

The greatest uncertainty is the ability of top management to adapt to the constraints of the new regulatory world.

But his dominance in British Gas has created, in the words of one Whitehall wit, "a circle of eternal deputies" beneath him. If the successor were chosen by the laying on of hands, it would prohably be Mr Evans, but he, too, is a gas man of the old school and very much in Sir Denis's shadow.

Few in the City, or in Whitehall, doubt that an infusion of new hlood is now needed. In a detailed study of the company, the hroker, Smith New Court, cautiously ohserves that an internal appointment would make it "likely that the transition from nationalised industry to mature plc will continue at a relatively slow pace."

OBSERVER

A Finn takes to tennis

■ The man who bought Wilson, the *leading American sports* good manufacturer, for $200m in cash last weekend is a flamboyant, 56-year-old Finn called Heikki O Salonen. He is also one of the few Finnish businessmen who works by numbers.

Salonen is chairman and chief executive of Amer, a group that has come to specialise in internationally known brand names. When he joined the company in 1972, Amer consisted mainly of a printing house and a Philip Morris franchise to manufacture and market Marlboro cigarettes in Finland. That, of course, was not a bad brand name to start with, and Salonen went on from there.

First he made acquisitions in Finland; in the last few *years he has been moving* abroad. Before huying Wilson, Amer's higgest division, accounting for almost half of net sales, was made up of the Toyota and Citroën franchises. Other businesses, apart from cigarettes, include printing, communications and investment, as well as metals and plastics.

The Amer Group is controlled hy three "faceless" Finnish foundations representing technical sciences and economists' societies. Salonen himself is far from "faceless". Ask any Finnish industrialist about the man and the answer is likely to be: "There you have a real character." Even the Amer Group house magazine called an interview with the chief executive: "A strange fellow from Finland."

He is very informal, a quality largely unknown in Finnish business. He dislikes ties, prefers to dress in non-business shirts and never hesitates to speak his mind. At the same time, he is a consummate student of the good life: indeed a graduate. He is one of the most sociable decisioo-makers in Finland "able to laugh all night long", as one of his friends puts it. The less known Salonen is found behind his desk. *He has a "phenomenal ability"*, according to a banker, to run the company by numbers. He pays close attention to p/e ratios and gives high priority to the company's relations with investors, especially abroad. The Amer Group was among the first Finnish companies to start paying dividends directly in line with results.

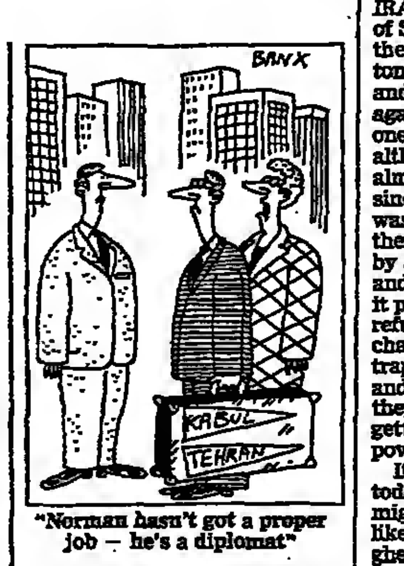
Salonen's business sense may also dictate his hobbies. When he bought MacGregor Golf Company from Jack Nicklaus in 1986, he promptly took golfing lessons and practised his drive in Florida. With the acquisition of Wilson, insiders *believe, he may well take up* tennis, although with a careful pace, more suitable to his non-athletic frame.

Silly mistake

■ A correctioo in the current Drug and Therapeutics Bulletin, a fortnightly puhlication for doctors and pharmacists, reads: "MANAGEMENT OF SERIOUS PARACETAMOL *POISONING* (12 *December* 1988). Under the section on eocephalopathy we said the patient should be nursed at 30-40 degrees. This referred to the angle in bed – not the temperature."

Friendly Clubs

■ The Industrial Society – the building, not the concept – was hurned down last Thursday. Or rather hurned up. The fire started at the top of the Society's headquarters in Carlton House Terrace in the heart of London's Clubland. It was 8.30 pm, the building was unoccupied and no one suspects arson or anything like that. Nevertheless, all the accounts were destroyed in the hlaze – the Society is inviting creditors to say how much it owes them – and the building will remain evacuated for at least six months.



"Norman hasn't got a proper job – he's a diplomat"

The Society has been overwhelmed by the offers of help both from the neighbouring clubs and from its clients. The Royal Society, the Turf Club, the Imperial Cancer Research Fund and the RAC Club all messed in at once. Clients who have offered alternative premises include John Laing, the construction group, in Mill Hill, Marks and Spencer in Chiswick and the Post Office in Croydon.

The Post Office offer is the most intriguing. Last year the Union of Communications Workers took the Post Office to court for trying to make its members take part in team briefings organised by the Industrial Society. The union lost. The Society, which specialises in easing industrial relations, will decide in the next few days where it is going.

Juno's cure

■ Here is a way of dealing with IRA *inmates*. Make a video of Sean O'Casey's Juno and the Paycock which opens tonight at the National Theatre and play it to them again, and *again, and again*. For, as anyone who sees it will realise, although it is set in 1922, almost nothing has changed since. The repuhlican army was as futile and ridiculous then as it is now. It worked by a mixture of intimidation and hravado. It got away with it partly because the clergy refused to condemn it. The characters in the play are thus trapped between the gunmen and the church, though what they care about most of all is getting out of their abysmal poverty.

If the play were rewritten today, the only difference might be that *it would* be *more* likely to be set in the catholic ghettoes of Belfast than Dublin, since the Irish Republic is a more mature place than *it* used to be and the IRA now thrives more in the north.

Not only should IRA prisoners be made to see it. So should half of the clergy and so should Margaret Thatcher, who might realise that social deprivation is one of the reasons why the IRA still finds sympathisers and *recruits*. The British Government could do something about that; the IRA has never been interested.

Do not be put off: it is also rather a good play.

Handy girl

■ The young secretary was telling her friend about the evening she spent with her boss. "We had a wonderful meal," she said, "and when he took me back to his Mayfair flat he showed me a wardrobe with six mink coats in it – and he *gave* me one." "What did you have to do?" asked the friend. "Just shorten the sleeves," she said.

Kevin Done looks at Volkswagen's plans for manufacturing small cars in Spain

Survival of the fittest

Volkswagen is looking to Spain to ensure its survival as a competitive maker of small cars in the 1990s. As West Europe's leading automotive group, it is burdened in its West German base by some of the heaviest manufacturing costs in the world motor industry.

Two years after acquiring a majority stake in SEAT – the former loss-making Spanish small car producer which was for a long time one of the European motor industry's poor relations – Volkswagen is aiming to spend Pta 670bn (£3.3bn) to transform SEAT's outdated manufacturing plants into one of the most cost-efficient assembly operations in Europe.

At the same time it will renew the SEAT model range to base it fully on Volkswagen components – most importantly engines and transmissions – and replace its dependence on Fiat technology. At the heart of the investment programme is the construction of a new Pta 220bn assembly plant able to produce 340,000 cars a year.

VW's conversion to small car-making in Spain has come late in the game – Renault, Peugeot, Ford and General Motors are already well established. However, it hopes that the heavy commitment to SEAT will give it a cost-effective production base for small cars in southern Europe. From here it will be able to challenge the small car leaders of Europe – Fiat, Peugeot and Renault – and fend off the challenge from Japanese production in Europe in the 1990s.

The small car market has grown faster than other segments. It is a market where price is crucial, and West German costs make small car manufacturing increasingly prohibitive. According to the VDA, the West German motor manufacturers' association, total wage costs per hour in the West German industry at DM 38.49 (£11.8) exceeded any other car-making country in 1988 and were 75 per cent higher than in Spain (DM 21.95), while West Germany was close to the bottom of the league for the number of hours worked per employee.

An important marketing attraction for Volkswagen is the addition of a third marque to its existing VW and Audi name-plates, an invaluable extra weapon in the struggle unfolding between VW and Fiat for European market leadership. The two groups tied in a dead heat last year. The Fiat group, marques include Lancia, Autobianchi, Alfa Romeo, and Ferrari. Reliance on a single name-plate has already seen Ford and Renault slipping down the European sales league.

The challenge facing VW is to rationalise the SEAT model range, and production facilities along the same lines that Fiat and the Peugeot group (which includes Citroën) are successfully achieving with their different name-plates.

According to Mr Friedrich Goes, SEAT executive vice president for product engineering, about 60 per cent of the manufacturing cost of future SEAT models could be represented by components common to other VW models such as engine and transmission, chassis parts, axles, brakes, electrical components and seat structures. "If you build like this on VW components and attract a customer who would not buy a Polo or a Golf, you are selling 60 per cent of an otherwise unsold Volkswagen." Future SEAT models will fill the gaps in Volkswagen's present range of Polo, Golf and Passat, and all new models will exclusively use Volkswagen engines and transmissions.

In order to compete on price and costs with both Japanese and South Korean imports and with the most cost-effective European-built small cars, VW is aiming to transform SEAT's antiquated manufacturing plants with the investment of Pta 518bn between 1989 and 1996 on plant and equipment, facilities and tooling. A further Pta 150bn will be spent on product development and project planning.

Mr Juan Antonio Diaz Alvarez, chairman of the SEAT management board, says that SEAT is planning to double its productivity, while substantially increasing its production capacity, reducing its workforce and out-sourcing many of its components.

The new assembly plant is to be situated at Martorell, 30 km north-west of Barcelona. With a planned cost of Pta 220bn it will be able to produce 1,500 cars a day and is due to begin operating by the end of 1992. In a move unprecedented for the European motor industry, the plant will operate round the clock on three shifts a day. "We cannot make such a big investment and not use it 100 per cent," says Mr Diaz Alvarez. "Soon we must also talk about seven days a week including holidays. It is not part of the plan but I am convinced this will come. Look at the Japanese, they are there already."

The plant will not be highly robotised, except in areas where robots are required for quality or safety reasons. "We have to keep clear that the costs of capital in Spain are double, but the costs of labour are half the German level."

SEAT's present manufacturing set-up is the product of a bygone age, but this will change significantly. SEAT is planning to shed many of its own components operations while benefiting from the economies of scale offered by drawing in components from Volkswagen's high volume global components operations spread between West Europe, Latin America and South Africa. SEAT will focus its operations tightly on the core activities of body design and engineering and vehicle assembly. "For the rest we will draw from the VW toy-box or from outside suppliers," says Mr Goes. Even for the design function, SEAT is looking outside and will rely heavily on the talents of leading Italian stylist, Mr Giorgio Giugiaro, and his Ital Design studio.

"We must reduce our break-even point to 70 per cent or even lower," says Mr Diaz Alvarez, "to be competitive on price and cost and survive fluctuations in the market. Outside suppliers can often do the job cheaper and more efficiently in smaller operations. Their labour costs are lower and they normally work longer hours."

SEAT will cease producing its own specific engines. Instead it will import basic engine block and cylinder head assemblies from VW engine plants outside Spain, and then "dress" the engines locally with fuel, exhaust and ignition systems on new engine assembly lines to be installed at both Martorell and Pamplona car plants.

According to Mr Diaz Alvarez, SEAT is aiming to shed operations with around 3,000 jobs from its 23,500 workforce in a four-year programme by the end of 1992. By 1995 the workforce should have been reduced further to 19,000, allowing for a leap in productivity from 17-18 cars per employee at present to 31 in the mid-1990s.

Behind these figures lies an ambitious VW plan to expand capacity. Under the existing SEAT spending plan, production could rise by a third to 570,000 cars a year by 1994 with 420,000 SEAT cars plus 150,000 VW Polos.

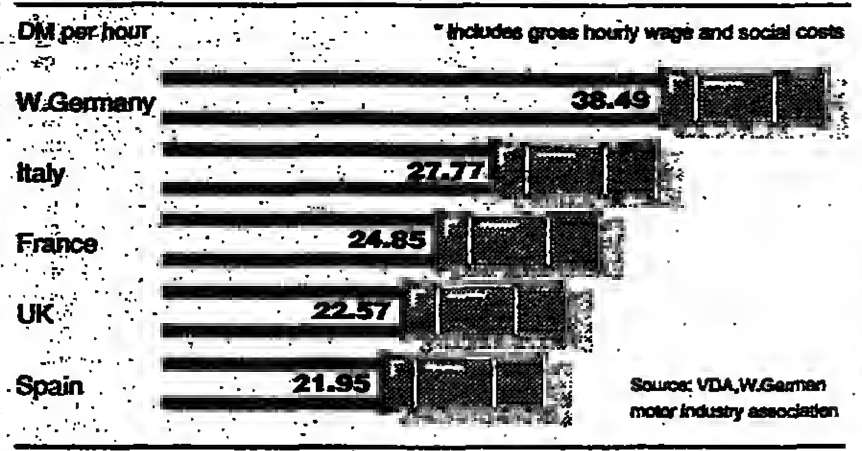
Senior VW managers suggest that SEAT could play an even more significant role as a VW European production centre in the 1990s. It is an open secret that Volkswagen management would like to move all production of the VW Polo small car to the presently under-utilised Pamplona plant. The move has been blocked so far by trade union opposition at VW's Wolfsburg headquarters, but SEAT insists that it would be far more economical for VW to meet all its Polo requirements at Pamplona. The move will probably be made in the 1990s. Such a move could increase Pamplona production to more than 1,000 units a day from 512 at present. The assembly of an additional 1,000-1,200 cars a day at Zona Franca could easily take VW's total production in Spain to 800,000 cars a year by the mid-1990s, a doubling of present levels.

There is a long way to go to realise such ambitions. SEAT was only marginally profitable last year with earnings of around Pta 1.8bn, but it has made great strides in the last two years from showing a loss of Pta 27.4bn in 1986. Last year's profit was its first in 11 years. Mr Diaz Alvarez is concerned that labour and political unrest in Spain could undermine some of the competitive advantages the country's motor industry has enjoyed in recent years, but he still insists optimistically that "by 1993-94 we will be fully competitive."

SEAT Group Source: SEAT

Production (Cars & car-derived vans SEAT/VW models)		Profit/loss (Pta bn) (* Parent company only)	
1984	279,031	1984*	–35.1
1985	320,311	1985*	–36.6
1986	338,548	1986	–27.4
1987	406,391	1987	–3.3
1988	433,482	1988	+1.8 Estimate

European motor industry labour costs* 1988



Taxation of life assurance

Policy for a libertarian caring society

By Jack Wiseman

The UK Inland Revenue has made proposals for change in the tax treatment of life assurance, and promises an imminent decision.

The empirical foundation for the Revenue's belief that life assurance still enjoys significant fiscal privilege is dubious. But the consultative document does provide an opportunity to consider wider issues of policy.*

The reforms offered, one of which, the document says, must be chosen, all imply a reduction in the yield to savings through life assurance. This is an untenable position viewed against the broader philosophy of policy which I believe to be appropriate.

The proposals are part of the process of UK tax reform which began with the 1984 Budget – of which the central theme was the tax treatment of saving.

The Chancellor's stated goal was fundamental reform of the taxation of different savings media. That Budget removed the tax relief on life assurance premiums which informed observers saw as the industry's significant privilege.

The Inland Revenue, nevertheless, claims that the tax yield of life assurance is still "too low." Its guiding criteria, "applicable to any tax system" are the orthodox principles of just taxation: Adam Smith would recognise most of them.

There are two of particular interest: equity and neutrality, which are taken to imply the "equal treatment of equals" in the sense of parity of liability to tax across different forms of saving; and "the Government's broader policy aims." It is the essence of my criticism that – apart from a reference to compatibility within the European Community – these broader aims are nowhere discussed nor do the identified policy options refer to them.

This frame of reference is unacceptably narrow for a savings medium of significant importance to the economy, and, in particular, to the savings behaviour of lower income groups.

Indeed, the whole exercise draws attention to the increasing need for a more sophisticated philosophy of public policy. With the growing acceptance of the change from a culture of dependency to one of freedom and enterprise, the thrust of government policy has inevitably shifted towards areas thought to be of "social concern."

Here, citizens are more doubtful as to the extent to which the free market writ should be allowed to run. This is evident in areas such as the delivery of health care. But it needs to be recognised as relevant to other areas, including life assurance.

A more appropriate paradigm for the consideration of policy in today's UK economy is that of public choice, which extends the concept of choice-through-markets to embrace all social choice situations: the choice of governments and constitutions as well as oranges and apples.

The libertarian version of this model, which treats the values of all citizens as carrying equal weight in the evaluation of policy, expresses very well the underlying goals of the Conservative "escape from dependency." But it also calls into question the notion that the casualties of change, which are the unavoidable consequence of the shift from government to personal responsibility and of the enhanced rate of economic growth, can be adequately provided for by the growth of private charity.

Citizens support the Government's concern for efficiency and freedom. But they question the implication that the Government has no role to play in giving expression to their caring feeling towards others. The policy problem of this "libertarian caring society" is to translate caring feelings into policy by means which are consistent with libertarian goals.

The application of such an approach to the life assurance proposals directs attention to some important but neglected issues.

First, there is convincing evidence that life assurance is the dominant form of long-term saving of a significant sector of the community, most of whom are in lower income-brackets. For this group, the savings market offers an unavoidably narrow range of choice, and the discouragement of participation in it (by tax changes likely to result in lower yields) is likely to result in reduced long-term savings rather than a switch to other savings media.

This is also the group that most needs help in coping with the transition towards savings self-reliance, and the group whose savings habits are most likely to be of general concern. The Government's apparent prejudice against the life assurance "man on the doorstep" ignores this, as does its failure to show any concern for "learning" (and the encouragement of thrift) by this group. There is a striking inconsistency between these proposals and the Government's policies (such as wider share ownership) to encourage private savings behaviour by higher income groups.

Second, life assurance is a significant and unusually resilient component of household saving, which, in turn, must become the increasingly predominant source of support for the investment that will be needed if the present rate of growth of the economy is to be sustained over the long term.

In sum, the broader policy framework suggests that the proposals are misguided in principle, and that the anomalies which the document addresses are, in any case, much less important than other anomalies in savings and related markets.

The time and effort being expended on life assurance taxation would be better devoted to devising a phased package of policies – combining benefit from tax rate reductions and loss of specific tax privileges – designed to reduce middle-income fiscal dependency. It is through such policies that the Government will retain the support for libertarian ideals of those most likely to begin to doubt the virtues of its policies.

* *The argument is more fully developed in the author's Long-term Savings in an Enterprise Economy, David Hume Institute, Occasional Paper No. 10*

LETTERS

Australia needs tough measures

From Mr Peter Frankel.

Sir, I forecast in your columns some months ago that Australia was heading towards a serious debt situation. Chris Sherwell's report (February 17) confirms my worst fears.

The surprise is that anybody should be astonished, even at the immense error in the budget forecast (I suggested at the time that the forecast was wholly incorrect).

Three factors have dominated the Australian economic scene:

● A high interest rate, which resulted in reputable banks, merchant bankers, money market operators, analysts and economists all touting the Australian dollar as a get-rich scheme to people who wanted very high returns at, apparently, very little risk. This made the Australian dollar the fifth or sixth most traded currency in the world; a position it neither deserved nor could sustain.

● The unwarranted strength of the Australian dollar – entirely speculation driven – created anomalies of increasing export prices to the extent that exports of some farm and most non-farm products were paralysed. But imports increased at a dramatic rate because of the ever-present hunger for consumer goods. Australia has never learnt to live within its means.

● In the interests of their shareholders Australian companies would certainly have invested overseas, with a very cheap entry because of the unrealistic and false value of the Australian dollar.

In addition to this state of affairs, tourism increased beyond any reasonable assumption because it was cheap to go abroad.

All in all, the package constituted a recipe for disaster.

When warned, in early 1988, that tough measures would have to be put in place, there was a lack of enthusiasm all round. Australian government and Australian business alike refused to understand the obvious dangers of an artificially inflated currency. The reality which has now caught up with them makes urgent measures mandatory.

First, a high withholding tax should be imposed immediately on short term earnings by speculative overseas investors.

Second, temporary import duties should be imposed on anything that is not necessary for the national welfare – even if it disturbs the Australian ethos of wanting to "buy foreign" and wanting to pay for everything by credit card.

Third, a declaration of a national export emergency – as in Britain in the 1940s – should be made, and exports stimulated by any cost effective means.

Lastly there should be a slow reduction of interest rates, coupled with a moratorium on salary increases at any level for at least 12 months.

Perhaps the shock of the January figures may finally bring about responsible action. Otherwise, eventually, the International Monetary Fund may have to be called in.

Peter Frankel,
Caixa Postal 1081,
Marginal-Cascais,
2751 Cascais Codex,
Portugal.

Price and profit in water

From Sir Frederick Corfield.

Sir, Mr Nicholas Ridley, the Environment Secretary, is reported (February 13) as contending that the statutory water companies' proposed "price jump of 30 per cent to 50 per cent ... proves the point that we need price control."

In fact it is needed only to fulfil the Government's repeated promises to ensure, on privatisation of the water authorities, what it calls "a level playing field."

But without this jump, on becoming public limited companies the companies cannot hope to compete with the privatised authorities for equity capital. While the companies are not to be compelled to become a plc, the Government can hardly argue that it wishes to retain "an outdated method of forming a business" which inhibits enterprise (see the white paper, paragraph 42).

Of course, it can equally well be argued that the companies' lower charges, and the fact that they have, in general, kept annual increases in charges below the rate of inflation, indicate that profit limitation provides effective price control. It is certainly much less costly and bureaucratic than that proposed – which is to have no statutory basis. On the contrary, the Secretary of State will have discretion to impose the requisite conditions in appointing companies as water or sewerage undertakers.

The charging formula set out in the model instrument of appointment will require a substantial, highly qualified staff for its enforcement. The cost is to be passed to consumers in higher charges – and it will prevent the companies from catching up with the privatised authorities once it is in operation.

Frederick Corfield,
Wordings Orchard,
Sheepscombe,
Stroud, Gloucestershire

Backlog of neglect could continue

From Mr Roy Martindale.

Sir, Mr Bellak (Letters, February 17) criticises the statutory water company model for water privatisation on the grounds that it affords the customer no protection in terms of price. This assertion is a little hard to swallow when the statutory companies have been advised to raise their charges substantially in order to place their finances on a footing comparable to those of water authorities when privatised.

The contention that the plc approach holds forth the prospect of great benefits from efficiency improvements is also rather thin. The cost structure of this capital intensive business is such that efficiency gains make only a small impact on costs and charges.

It should be recognised that with prices constrained, the real incentive for a plc is to reduce all its outgoings. In the water industry this creates pressure to cut the largest single item: expenditure on capital assets, 70 per cent of which comprise 500,000 kilometres of underground mains and sewers. It is not difficult to identify the tempting target.

Under-investment in maintaining the system is hard to determine in the short-term. One generation of shareholders and managers can enjoy profitable times while building a backlog of neglect to be faced by a succeeding generation of customers.

This inbuilt threat to services is an important reason why the plc approach to privatisation requires a director general of water services (with the unenviable task of keeping an eye on 10 – possibly 38 if the statutory companies change their status – plcs).

The statutory companies have operated successfully for over 100 years without this kind of regulator: a proven solution to an old-fashioned problem because their priorities are the right way round. They work for customers first; plcs work for shareholders.

Roy Martindale,
42 Ruskin Close,
Rugby, Warwickshire.

Company cars

From Mr A.N. Marshall.

Sir, Your feature on the taxation of cars provided for business use (February 15) contains highly questionable assessments of the value of car provision to the driver.

Lifetime costs for fleet cars need not be guessed at; objective evidence of operating costs is widely available, showing average costs per mile far below the levels quoted. For example: the aggregated depreciation, service and repair costs for one popular fleet car – the Ford Sierra 1.6L – is currently assessed at some £1,800 per annum on a typical 20,000 miles per year/three-year cycle.

Bearing in mind that most journeys would normally be essential business and professional use – and hence the greater share of the operating costs should accrue to the provider – the current benefit scale of £1,400 for the private element in using such a car seems far from generous – indeed, it clearly overstates the value of the benefit derived.

By all means attach notional values to any benefit for tax assessment purposes, but these should be seen to be objective and just. The present structure of benefit scales seems arbitrary and unfair.

A.N. Marshall,
Motor Agents Association,
201 Great Portland Street, W1

FINANCIAL TIMES
Wednesday February 22 1989

Six oil-producing nations agree to limit exports

By Steven Butler in London

SIX OIL-producing countries agreed in London yesterday to limit oil exports during the second quarter of the year to lend support to efforts by the Organisation of Petroleum Exporting Countries to stabilise oil markets.

A statement issued after the meeting of technical experts said a majority of participants agreed to cut exports by a specific, although undisclosed percentage. Others agreed to an export freeze or would consult with their governments to determine any contribution.

The six countries were Angola, China, Egypt, Malaysia, Mexico and Oman. Attending as observers were the US state of Alaska, the Canadian province of Alberta, Colombia, Norway, the Soviet Union and the Yemen Arab Republic.

It was unclear if any observers would be willing to support the measures, although the Soviet Union had been expected also to offer to cut exports.

Representatives leaving the meeting said that announcement of details of commitments made by specific countries would be made by ministers in the next week. However, it is believed that the export cuts could amount to between 200,000 and 300,000 barrels a day.

The cuts appear to be unilateral and not contingent on any reciprocal response by Opec. The experts expressed satisfaction with the most recent Opec production agreement, which set a target for Opec output at 18.5m b/d, and expressed gratitude for "growing improvement in achieving the agreed Opec production targets."

Estimates from the Opec secretariat in Vienna have put Opec production within quota, with the exception of the United Arab Emirates. However, these estimates are widely discounted in the oil industry, where Saudi Arabia, Kuwait, the UAE and Iran are believed to be producing oil well above their Opec quotas, raising total output to more than 19.5m b/d.

It is unclear how much of this production falls under the Opec quota definition, which would exclude additions to stock.

Commodities, Page 34

World leaders march to Hirohito

Statesmen gather to bury him – not perhaps to praise him – and to honour an economic superpower, writes Ian Rodger from Tokyo

AT ONE point in the tumultuous lifetime of Japan's Emperor Hirohito, more than half the world's leaders would have sneered at mere mention of his name. Many thought, and may still think, that he should have been tried as a war criminal at the end of the Second World War. It was, after all, in Hirohito's name that Japan's military forces advanced ruthlessly on China, South-east Asia and ultimately the US in the 1930s and early 1940s.

Yet this week, representatives from more than 150 countries and a score of international organisations have come to Tokyo to pay respects to the man who died last month aged 87 after more than 62 years on the Chrysanthemum throne. To the evident, if discreet, delight of the Japanese authorities, more countries are represented in Tokyo than were at the funeral of President Josip Broz Tito of Yugoslavia in 1980 or of US President John Kennedy in 1963.

The visitors include President George Bush, Mr L. A. Ivanovich, Soviet Deputy Chairman of the Presidium, Mr Qian Qichen, Foreign Minister of China, Mr Javier Perez de Cuellar, United Nations Secretary-General, and a host of lesser state and government leaders. More than 30 presidents are due to attend; normally attendance at state funerals is part of the dreary lot of vice presidents, but only eight of that breed appear to be going.

This procession of the great and the powerful is not just – and perhaps not even mainly – in honour of the Emperor Showa, as he is now called. Many of the visitors are really paying tribute to Japan, the country that has risen from the ashes of defeat in war to become an economic superpower whose favour is worth courting. Mr Bush himself set the tone last month when he announced that he would attend. Washington's relationship with Japan was its most important bilateral one, he said.

Many other governments then decided that, whatever their feelings about the past, this was not the time to snub Japan. Mr Bob Tizard, New Zealand's Defence Minister, said last month that any expression of sympathy for the Emperor "grates against my back teeth", but Sir Paul Reeves, the country's Governor-General, is in Tokyo. British veterans may have protested about the Duke of Edinburgh attending, but he too is there, and the early announcement of the UK's plans probably added respectability to the importance given by Mr Bush. Even the Dutch, who agonised for weeks over bitter Second World War memories, ended up sending their Foreign Minister.

But the big numbers are made up by developing countries. Many of them would have wanted to attend as supplicants to the new big source of financial assistance; others perhaps decided after a friendly nudge from their representative for Japan's burgeoning aid effort.

Mrs Corazon Aquino, President of the Philippines, is in Tokyo, as is General Suharto, President of Indonesia. The presence of Prince Norodom Ranariddh, personal representative of Prince Norodom Sihanouk of Democratic Kampuchea, reflects Japan's emerging position as a political problem solver. General Ibrahim Badamasi Babangida, President of Nigeria, heads a distinguished parade of leaders from more than 30 black African countries. Nigeria's unhappiness about Japan's recent trading record with South Africa may have been assuaged by Tokyo's help with much-needed loans. Other African leaders may have noticed that Japan has begun to pour significant amounts of aid into Africa.

Only the European Commission appears to have deliberately downgraded its presence, sending Mr Frans Andriessen, a Vice President, rather than Mr Jacques Delors, the President. Analysts in Tokyo wonder if this reflects the quaint view found in some quarters of the EC that Japan is still just a nuisance that creates trade problems, not an increasingly important and powerful ally.

Whatever their official reason for going, many of the visitors probably wanted also to see and assess for themselves the country that has come from nowhere to occupy such an important place in the world.

Dazed by jetlag, whisked about Tokyo for a day or two in hermetically-sealed cars from airport to hotel to government guest house to funeral and back to the airport again, they will, however, have little opportunity to see much of Japan.

Perhaps there is not that much to look for. A Western diplomat who has just returned to Tokyo was asked last week about his impressions after a 10-year absence. "Nothing terribly original," he answered. "One is struck by the wealth, the confidence. The Japanese are really on top of the world." The Emperor's funeral on Friday morning can only add to those feelings.

War row smoulders on

A FRESH row over the role played by Emperor Hirohito in the Second World War has broken out only two days before his funeral, writes Ian Rodger.

Analysts in China and South Korea have seized on remarks made by Mr Noboru Takeshita (right), the Japanese Prime Minister, in the Diet (parliament) last Saturday as showing that the Japanese have still not accepted responsibility for their behaviour during the war. They also objected to remarks by Mr Osamu Ajimura, director-general of the Cabinet legislative bureau, that the Emperor bore no legal responsibility for Japan's conduct during the war.

Mr Takeshita was asked by Mr Tetsuzo Fuwa, a Japan Communist Party member, whether or not the war launched by Hitler was a war of aggression. He replied that there were various theories on what constituted a war of aggression, and that it was "very difficult to academically define a war as a whole as a war of aggression". Mr Fuwa then recited various acts of Japanese aggression on its Asian neighbours during the war and asked Mr Takeshita what his attitude was towards the war. The Prime Minister replied: "There are various arguments on whether the past war was a war by accident or for self-defence. I believe, however, that it is the historian's task in later ages to form a conclusion on whether or not it was a war of aggression."

In response, a South Korean newspaper demanded that the Japanese Government admit responsibility for acts of aggression during the war, and Korean students demonstrated in protest against the plan by Mr Kang Young Hoon, the Prime Minister, to attend the funeral.

Chinese newspapers seized on Mr Ajimura's remarks, quoting one historian to the effect that the Emperor was present at all meetings at which important decisions were made concerning the conduct of the war.

Yesterday, in an attempt to defuse the issue, Mr Sosuke Uno, the Japanese Foreign Minister, said Mr Takeshita had not explained Japan's position fully. The Government acknowledges that it inflicted great damage on its neighbours during the war. It will try to explain its position to the countries concerned through diplomatic channels.

Tax threat to Soviet co-operative movement

By Quentin Peel in Moscow

THE Soviet Union's tiny but rapidly-growing co-operative movement, a key element in Mr Mikhail Gorbachev's efforts to galvanise the economy, is facing a threat from tax legislation approved by the ruling Politburo.

The 15 republican governments in the Soviet Union have been given a free hand on the tax rates they will choose to impose on co-operative ventures, with no ceiling on the level at which they should be set.

The decision could mean the introduction of swingeing tax rates because of widespread public resentment at the high prices charged, and high wages paid, by the new ventures.

At the same time, the taxes will be imposed on "gross income" before allowing for wages and investment in future production rather than net profits.

The plans were condemned yesterday by Mr Lev Nikiferov, a leading specialist in the co-operative sector at the Soviet Academy of Sciences Institute of Economics.

The draft law was drawn up after earlier attempts to impose steep taxes on the semi-private sector were blocked last year by economic reformers.

However, Mr Nikiferov warned that the latest version could still result in co-operatives being "completely eradicated" in some republics where the authorities were hostile to the whole concept.

He said that he "categorically opposed" the idea of imposing taxes on gross rather than net income, which was based on a misguided desire to equalise competition between state enterprises and co-operatives simply on the basis of taxation.

He said the ventures had to pay on average three times more for their raw materials than state enterprises, because they had to buy them at free market prices. "If you level out the co-operatives and state sectors, then you have to level them out in this respect too," he told Pravda, the Communist Party newspaper.

Although he approved in principle of giving the republics the right to determine tax rates, some republics "do not welcome co-operatives with open arms," he said.

"To grant such regional authorities such a level of influence could lead to their complete eradication in some places."

Co-operatives are currently enjoying a tax honeymoon, with maximum rates no higher than 10 per cent.

The threat of high taxation is the third blow to the movement in the past two months. On December 29, the Soviet Council of Ministers passed controversial restrictions on a whole range of enterprises, banning many medical, publishing, educational and video ventures.

Price controls approved by the Politburo could also be used to restrict drastically their freedom to operate, and put them at the mercy of existing government departments and enterprises.

However, the draft does propose slightly more generous tax privileges and exemptions for ventures in remote areas, for those supplying goods in short supply, and for newly-established ventures.

THE LEX COLUMN

Slings and arrows at NatWest

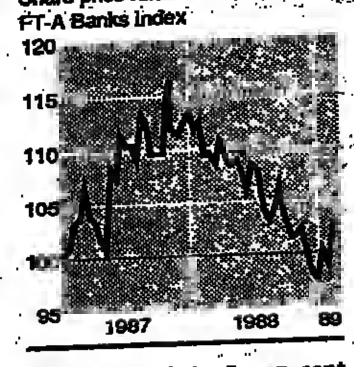
National Westminster shares were the star performers of the UK banking sector in 1987, and their fall from grace last year – they underperformed the market by a massive 16½ per cent – is an embarrassment for what has long regarded itself as the UK's premier bank. Yesterday's 15 per cent rise in the group's 1988 pre-tax profits and a generous dividend increase shows that there is not a lot wrong with the group's core businesses; and even the losses of the much criticised investment banking division only accounted for 4 per cent of the group's profits. So why are NatWest shares selling on 5 times earnings, and at a discount of nearly a fifth to net asset value?

Clearly, NatWest is having a problem containing costs, and its margins are under attack. Total assets increased by 13 per cent, yet operating costs rose by 21 per cent; and though part of this is explained by the $760m acquisition of First Jersey National, the group will be pressed to restore its cost income ratios to their 1987 levels. There will be little respite from these pressures in the current year, and as a result its profits are likely to grow by less than 10 per cent. But its performance is not going to be much worse than its rivals, and its dividend should grow faster than Barclays'. Meanwhile, its decision to boost its tier one capital by capitalising part of its vast property revaluation – a move likely to be copied by others – has removed any threat of a rights issue.

There are undoubted concerns about the group's ambitions strategy, particularly in the US and in investment banking. But this is not enough to explain the shares' current rating, which has a lot more to do with questions about management succession and the DTI inquiry into the Blue Arrow affair. Until these are resolved, NatWest shares are unlikely to sparkle.

NatWest

Share price relative to the FT-A Banks index



US economy

Few thanks are due to Mr Gerhard Stoltenberg for misinforming the markets in the matter of the Fed's 1989 inflation projections; but at least he can claim the dubious distinction of having got his predictions more wrong than the most of the rest of the Fed-watching community. They were expecting yesterday's testimony in Congress to turn out pretty much as it did: with the Fed chairman projecting 2½ to 3 per cent real gnp growth in 1989, and 4½ to 5 per cent inflation.

The foreign exchange and US treasury bond markets were not above registering a shaky reaction to the first set of numbers. When the projection came across the news wires in headline form, it looked like a gesture in the direction of Mr Bush on the question of growth and the deficit; the dollar and the US long bond quickly showed what they thought of that. But the market soon recognised the fudge factor – half a point tacked on for the drought effect – and settled back into more familiar expectations on growth. And as for the verbal inflation offensive, the market had heard it all before. The Fed funds rate may still make it to 9½ per cent sooner rather than later, but it would be hard to use yesterday's testimony to prove it.

MB/Carnaud

Ball Corporation's increased £835m offer for Metalbox Packaging is doubtless final, and doubtless doomed. The figure merely catches up with the value of the MB/Carnaud proposal, as measured by the rise in the Carnaud share price. It is also conditional on MB providing information it has already given to Carnaud, and MB will certainly refuse. And above all, it seems certain that at Friday's EGM the institutions will follow the lead of Mercury Asset Management, which speaks as adviser for 14 per cent of the equity, and vote with the board.

Not that the squabble has left MB unscathed. The board claims that the exit multiple represented by Ball Corp's offer – something close to 12 times – is wholly inadequate. But as Ball Corp nastily points out, trading profits from the business were lower last year than four years earlier, just before MB's present chairman arrived. But then, the MB plan effectively means giving operating control of the business to Carnaud: over the same period, Carnaud's net profits have shot up by 250 per cent, wholly overshadowing anything the American camp could claim on its own behalf.

And MB shareholders, of course, would retain a stake in the merged business. But this should be in the price already: the rise in the value of the Carnaud deal – from £780m originally to £840m – reflects the French market's assessment of its prospects. It might seem odd that MB shareholders are to be denied the option of a cash equivalent; but the Ball/Elders initiative is too tricky, and too late.

British Gas

It is not just routine obstinacy that makes British Gas fight its regulator over the allocation of costs between its three main businesses. If Ofgas get its way – and it is not in the habit of losing fights with its wayward charge – British Gas could find there is worse news to come on industrial gas profits. The dispute centres on how much overhead should go to the supply of domestic gas, Ofgas arguing for a greater, and British Gas for a lesser portion. If the competitive contract market is made to bear a smaller share of the costs, the returns, shortly to be published for all to see, may be embarrassingly fat. That would rather destroy British Gas's recent protestations to the MMC, and could mean pressure for even more competitive prices for its industrial customers.

In the domestic sector, by contrast, the lower returns will not necessarily mean higher gas prices. Ofgas has already made it clear that British Gas earns too much money from its domestic customers, and when the pricing formula is reviewed in three years time, the regulator will be aiming for an implicit return not much higher than long term interest rates. The suggested cost allocation might bring about that result without radical changes to the formula.

By now, British Gas's poor shareholders must be immune to damaging outbursts from Ofgas, and the near 25 per cent underperformance in the shares since the beginning of last year shows how they have gradually abandoned hope of the company being anything better than a dull old utility. The redoubtable efforts of Ofgas suggest it will never be allowed to be anything else.

US shift may end farm trade impasse

By Nancy Dunne in Washington

THE US is now talking about a "ratcheting down" rather than total phase-out of farm subsidies, in a shift of positions which could break the impasse over agriculture trade in international trade talks.

The formula was presented in a US position paper in Washington over the weekend to Mr Frans Andriessen, EC External Affairs Commissioner, by Mrs Carla Hills, US Trade Representative, and Mr Clayton Yeutter, US Agriculture Secretary.

EC officials are taking a hopeful view of the proposals. Mr Andriessen said that under the Bush Administration "there is a new spirit."

While the US has not changed its ultimate objective of eliminating all trade-distorting agricultural subsidies, the Bush Administration has abandoned its insistence on the language clarifying the objectives. This would free other talks on such issues as trade in services, investment and Gatt reform.

In further ministerial talks on March 10 and 11, negotiators are expected to focus on procedures for the negotiations. US officials have also abandoned their insistence that long-term measures on agriculture trade be agreed before discussions can begin on more immediate measures. But this may lead to difficulties for the EC if, as expected, the US seeks wider market access for its grains in the short term.

US farm groups, which have been insisting on the phase-out language, yesterday seemed resigned to the compromise but concerned about the "ratcheting down" process. A spokesman for the US Feed Grains Council said that EC subsidies are much higher than those provided by the US, so cutting both by a specified percentage could leave US products uncompetitive.

Full-function pocket

Continued from Page 1

vale, California, whose chairman is Mr Robb Wilmot, former chief executive of ICL, the UK mainframe computer maker.

It is due to launch a pocket-sized computer which it claims will pass the test of true IBM PC compatibility, the ability to run the operating software system MS/DOS.

The development of a battery-powered computer (according to the manufacturers, it operates for eight weeks in normal use on three small batteries) small enough to fit a pocket or corner of a briefcase while retaining the power of a desk-top machine has been a major challenge for the industry.

The larger lap-top machines, which can fit in a briefcase and have a nearly full range of capabilities, are heavy and bulky with, at most, three hours battery life.

The Atari computer, the Folio, was designed using technology licensed from Distributed Information Processing a small British electronics company based at Guilford. DIP's managing director is Mr David Frodsham and its chairman is Sir Kenneth Corfield, former chairman and chief executive of Standard Telephones and Cables.

Poqet this week announced the opening of its international headquarters in Surrey, south of London, and named Mr Tom Cairns, a computer industry professional as vice president, international operations.

Poqet and DIP last year had talks with a view to joint research into the technologies necessary to achieve a full function pocket computer but they came to nothing.

Meanwhile, Psion, the UK company which developed the Organiser, a hand-held electronic notebook still selling some 20,000 a month, intends to launch later this summer its own design of portable computer with a three month battery life in normal use.

It will be larger and heavier than either the Atari or the Poqet.

Mr David Potter, Psion managing director, said yesterday that a screen and keyboard the size of an A4 sheet of paper were essential.

WORLD WEATHER

		°C	°F
Ajaccio	S	16	61
Algiers	S	19	66
Amsterdam	F	11	52
Athens	F	15	59
Bahrain	F	21	70
Bangkok	F	33	91
Barcelona	F	13	55
Beirut	-	—	—
Belfast	F	06	43
Belgrade	C	20	68
Berlin	F	07	45
Biarritz	C	13	55
Bombay	S	30	86
Bordeaux	F	14	57
Brussels	C	10	50
Budapest	C	05	41
B. Aires	R	28	82
Cairo	F	16	61
Cape Town	S	26	79
Caracas	C	24	75
Casablanca	C	13	56
Chicago	Sn	-1	30
Cologne	F	07	45
Copenhagen	F	08	46
Corfu	S	16	61
Dallas	C	07	45
Dublin	F	10	50
Dubrovnik	F	13	55
Edinburgh	F	07	45
Faro	F	16	61
Florence	S	14	57
Frankfurt	C	14	57
Funchal	C	16	61
Geneva	C	14	57
Gibraltar	R	14	57
Glasgow	F	06	43
Guernsey	S	09	48
Helsinki	F	03	37
H. Kong	F	24	75
Innsbruck	R	07	45
Inverness	F	05	41
Islamabad	F	18	64
Istanbul	F	10	50
Jakarta	R	29	84
Jersey	S	09	48
Jo'burg	C	24	75
Lima	F	27	81
Lisbon	C	17	63
London	F	12	54
Los Angeles	F	19	67
Luxembourg	C	05	41
Madrid	C	17	63
Majorca	S	17	63
Malaga	F	15	59
Malta	F	16	61
Manchester	S	07	45
Manila	C	31	88
Melbourne	F	19	66
Mexico City	F	24	75
Miami	R	25	77
Milan	D	05	46
Montreal	Sn	01	34
Moscow	C	-2	28
Munich	R	06	43
Nairobi	C	25	77
Naples	C	13	56
Nassau	-	—	—
New Delhi	F	23	73
New York	C	07	45
Nice	-	—	—
Nicosia	F	17	63
Oporto	C	14	57
Oslo	F	07	45
Paris	R	13	55
Peking	F	04	39
Prague	F	05	41
Reykjavik	F	-4	25
Rhodes	S	15	59
Rio de J'o	F	35	95
Rome	C	18	64
Salzburg	R	07	45
San Francisco	C	17	63
Seoul	F	05	41
Singapore	C	31	88
Stockholm	F	04	39
Strasbourg	R	06	43
Sydney	F	25	77
Taipei	F	21	70
Tangier	R	13	55
Tel Aviv	F	17	63
Tenerife	S	20	68
Tokyo	C	14	57
Toronto	Sn	01	34
Tunis	S	19	66
Valencia	F	18	64
Venice	D	05	41
Vienna	C	07	45
Warsaw	C	10	50
Washington	R	04	39
Zurich	R	07	45

Readings at mid-day yesterday

C-Cloudy D-Drizzle F-Fair Fg-Fog H-Hail R-Rain S-Sun Sl-Sleet Sn-Snow T-Thunder

Iran recalls all ambassadors from EC

Continued from Page 1

that, following Monday's EC agreement, Britain had concluded that in its particular case it was "neither possible nor sensible to conduct a normal relationship with Iran."

EC Interior Ministers would "consider urgently" the practical steps necessary to limit the freedom of Iranian diplomats in Community countries.

The Swedish Embassy in Tehran will look after British interests.

Iranian leaders were outwardly unrepentant yesterday, and the Iranian news agency Irna quoted Mr Mir Hussein Mousavi, the Prime Minister, as calling the EC diplomatic sanctions a useless manoeuvre certain to harm the EC rather than Iran.

The English-language Tehran Times, referring to the forthcoming visit to Iran of Mr Eduard Shevardnadze, the Soviet Foreign Minister, said the West's attitude was of benefit only to the Soviet Union. Moscow, however, is as wary of Islamic fundamentalism as the West, and it strongly supported Iraq during the Gulf war which ended last year.

Moderates in Iran have tried to promote outside involvement in post-war reconstruction, and are thought to be concerned by the damaging effects of the Rushdie affair.

A British Technical Week, focusing on the oil and gas industry and power generation, was due to take place in Tehran next month, but British officials now say it is unlikely to go ahead and British citizens have been advised not to travel to Iran unless it is absolutely necessary.

INSIDE

NatWest takes the bad with the good

It has been a traumatic year at National Westminster, the UK's largest clearing bank, which yesterday reported doubled profits. Government inspectors are still examining the rola of County NatWest, its investment banking arm, in the Blue Arrow affair, and County yesterday cast a damper on the good results news with a loss of £56m. Page 30

Blind investment pays off

"We must be abla to see beyond the tip of our noses because we ara blind," says Miguel Duran, 33 years old and sightless from birth. The managing director of Once, Spain's Association for the Blind, has taken tha organisation on a spending spree in a bid to make it a power in corporate politics. As a result, Once could become a key player in the increasingly embattled Banco Central and Banesto merger. Page 25

Hard times Down Under

Foreign banks face a hard time in Australia. When the Govarnment granted full operating licences to 16 banks in 1985, few thought that the battle for market share would take such a heavy toll. Deregulation, fiarce competition, and a strong Australian dollar mean that many of the new foreign banks have been a disappointment. Page 28

Antwerp struggles to shine

Antwerp'a diamond traders polished up their profits last year as turnover surged by 28 per cent to £6bn ($10.5bn). But the city's cutting and polishing sector is struggling to cope with competition from low-cost Far East rivals and their subsidised Israeli counterparts. After heavy job losses the industry is seeking governmant support. Page 34

Uneasy spirit of banking merger

Italy's Cassa di Risparmio di Roma, the country's second-largest savings bank, has taken a controlling stake in the state-owned Banco di Santo Spirito. The merged institution will be among the world's top 100 banks. The merger was not all sweetness and light, however, with considerable political opposition. Page 22

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		Yorkshire Chemicals	33

Chief price changes yesterday

FRANKFURT (DM)			
Falls			
Lufthansa	166.2	−	3.8
Babcock	173.5	−	3.5
RWE	264.5	−	4.5
NEW YORK ($)			
Rises			
Anfo Indo	24⅛	+	5
Cardis	13⅜	+	1⅝
DWG Corp	8⅞	+	⅞
Texas Eastern	52	+	3½
Falls			
Panhandle Eastn	23⅞	−	⅞
Polaroid	43⅞	−	⅞
PARIS (FFr)			
Rises			
SFIM	175	+	13
Midland SA	213.8	+	14
Scrag	706	+	48
Eurotunnel	94.7	+	5.1
Falls			
Epeda	1155	−	52
Printemps	921	−	17.5
Valeo	670	−	16.5
TOKYO (Yen)			
Rises			
Fukusuke	1360	+	156
Daido Steel	1040	+	104
Sailor Pen	1220	+	100
Falls			
Maeda Rd Const	1840	−	140
Hiraki Works	1560	−	130
[illegible]	1210	−	90

New York prices at 12.30.

LONDON (Pence)			
Rises			
Bristol Eve Pst	368	+	10
Cap & Counties	390	+	10
Chamberlain Ph	218	+	29
Colorgraphic	256	+	12
Courtaulds	309	+	8
GUS A	1128	+	13
Hillsdown	288	+	8
Local London	541	+	47
Lowe Hwrd-Spink	388	+	10
Meat Trade Sup	380	+	17
Midland Bank	475	+	9
Peters (M)	124	+	9
Priest, Marians	439	+	10
Sutar	207	+	8
Wolv & Dudley	491	+	11
Falls			
Gen Accident	958	−	27
Glamar	156	−	10
Glaxo	1260	−	11
Norton Opax	184	−	8
Pearson	701	−	16
Prov Financial	348	−	15
Reed Intl	432	−	10
Spice	71	−	7
Stanley Lets	254	−	7

Nestlé criticises London stock exchange

By William Dullforce in Zurich

NESTLE, the Swiss foods group which bought Rowntree of the UK in a controversial £2.5hn ($4.4bn) takeover last year, sharply criticised the London stock exchange yesterday for the "voluminous" disclosure requirements it imposes on a company seeking a listing.

The information demanded "stops just short of requiring blood tests of our board members", said Mr Daniel Regolatti, the senior vice president responsible for finance.

After shaking the conservative Swiss stock market last November by saying that it was opening its registered shares to foreigners, Nestlé has been seeking to enlarge its investor base.

It has met difficulties in securing listings for its shares on major exchanges such as London, Tokyo and New York. First contacts had shown that "we may require not only more effort but also more time than we initially expected", Mr Regolatti said.

The problem was not the quality of the consolidated figures presented in the company's annual report. There was a "minor stumbling block here and there" which could be overcome.

But Mr Regolatti saw no reason to provida "the curricula vitae of all our board members and the salary of Mr (Helmut) Maucher (Nestlé's managing director) plus much more which will not help investors to take decisions." If the London stock exchange became too tough, Nestlé might not pursue its request for a listing.

Fortunately, the major stock exchanges were not entirely in the driver's seat, Mr Regolatti said. The start to trading in Nestlé shares on SEAQ, London's all-electronic international market, in September had shown the exchanges that the market would take matters into its own hands if their demands were to severe.

A "Euromarket" in equities could easily be established and could develop into a world market, with shares traded electronically on screens 24-hours-a-day, Mr Regolatti said. But he acknowledged that such a development would not be without its disadvantages.

His remarks were made at a conference organised hy the magazine Euromoney at which he explained the constraints of the Swiss stock market that had led Nestlé to remove its ban against foreign ownership of its registered stock.

Swiss regulations are now compounding the company's difficulties in acquiring foreign listings. Nestlé wants to reduce the nominal value of its shares to make them more attractive on exchanges abroad.

Tha best it can do under current Swiss regulations is a 1: 10 stock split, reducing the nominal value from SFr100 to SFr10. That would drop the market price of a share to around SFr700 ($450), still too high to trade comfortably in New York. "We have had to go into ADRs (American depositary receipts)," Mr Regolatti said.

There has been speculation thet after opening its registered stock Nestlé would "retire" its non-voting participation certificates, perhaps hy converting them into bearer shares at a favourable price.

Nestlé had simply outgrown the Swiss capital market, Mr Regolatti said when explaining company's decision on the registered shares.

After spending SFr7bn to acquire Rowntree and Buitoni of Italy last year, Nestlé realised that the Swiss market would be able to absorh no more than SFr350m-400m in new Nestlé equity within two years.

SocGen dispute close to accord

By George Graham in Paris

THE PROTAGONISTS in the four-month battle for control of Société Générale, the privatised French banking gronp, were last night close to reaching a final settlement of their differences.

The settlement is understood to involve the break-np of SIGP, the vehicle throngh which Mr Georges Pehereau, the French financier, built np a 10.36 per cent stake in Société Générale last October, with the insurance group Axa taking over part of the holding.

The Caisse des Depôts et Consignations, the state financial institution which is Mr Pebereau's principal hacker in SIGP, and which also owns 4 per cent of SocGen directly, would remain the bank's largest shareholder with nearly 6 per cent.

Mr Pebereau acknowledged in an interview yesterday with Les Echos, the Freoch business newspaper, that he was ready to reduce his stake in SocGen, provided it was at an acceptable price.

Mr Marc Vienot, SocGen's chairman, had earlier stated as a condition of settlement that he should not have to buy in his company's shares at too high a price, and that no shareholder should end op with more than 4.5 per cent of the bank's capital.

Negotiations condncted hy Mr Jean-Clande Trichet, director of the French Treasury, have, however, succeeded in solving most of the differences between the two sides.

The battle over SocGen opened last October when Mr Peberean declared a stake of 9.16 per cent. It has embroiled France's financial and political worlds in a bitter dispute.

The presence of the Caisse des Depôts among Mr Pebereau's backers, and the overt support of Mr Pierre Beregovoy, the Finance Minister, for his operation, led to criticism from the opposition that the Government was attempting a backdoor renationalisation of SocGen.

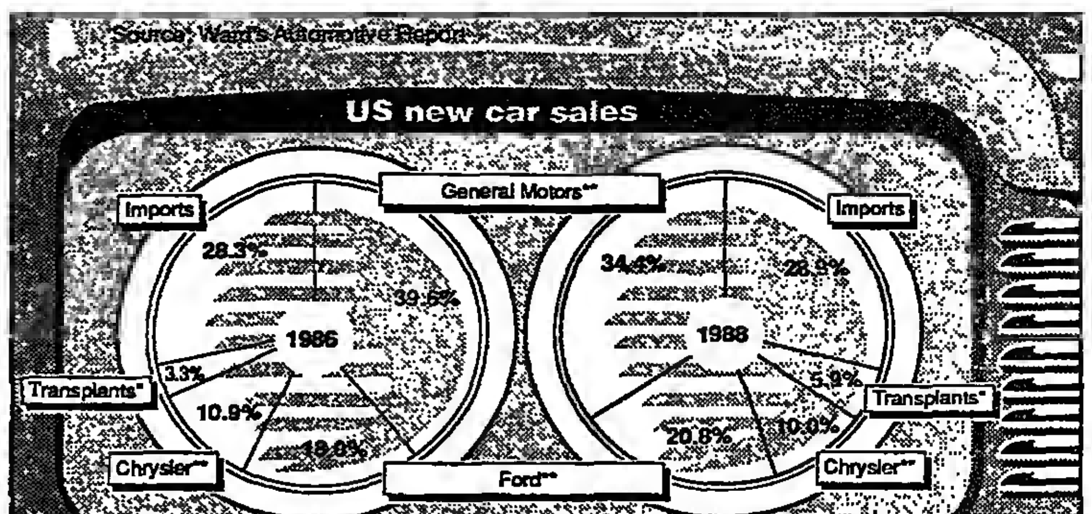
The Bank of France was also eccused of complaisantly giving Mr Pebereau permission to raise his stake above 10 per cent without checking on his hackers.

Mr Beregovoy countered by attacking the "hard cores" of supposedly friendly shareholders put in place hy his predecessor, Mr Edouard Balladur, at the time of the privatisations. Both Mr Pebereau and the Caisse des Depôts were selected hy Mr Balladur for SocGen's hard core.

Mr Vienot, meanwhile, suffered veiled criticisms of his management ahilities, although his opponents now recognise his vigour in defending SocGen.

Detroit in a struggle with the sceptics

Anatole Kaletsky on the outlook for the big US car manufacturers



AFTER a decade of unprecedented trials and tribulations, the great US multinational car makers, General Motors and Ford, remain the two biggest industrial companies in the world. Their record earnings of $5.2bn and $4.9bn respectively also revealed last week that Ford and GM have regained their traditional positions as two of the most profitable businesses ever.

But as the stock market's contemptuous reaction to these results suggested, Ford and GM remain among the companies that investors admire least. GM's shares now sell for only seven times its annual net earnings, Ford's shares are rated lower, on a price-earnings ratio of five.

There are many explanations for the low esteem in which investors hold the car makers, but they can probably be summarised in three words: recession, management and Japan.

While very few economists expect a recession either in the US or the world economy to begin this year, the industry and Wall Street are clearly both worried about the widespread forecasts of high interest rates producing an economic slow down from the second half of the year onwards and possibly precipitating an actual downturn in 1990.

Yet the threat of an economic downturn cannot explain the car makers' lowly ratings on its own. A macroeconomic slowdown, even assuming a further monetary tightening, may have relatively little impact on US car demand. The latest Blue Chip survey of leading economic forecasters suggested, for instance, that in spite of an expected slowdown in US GNP growth from 3.8 per cent in 1988 to 2.7 per cent in 1989 and 1.7 per cent in 1990, car sales would decline only marginally.

These forecasts suggest very little reduction in total automotive demand, considering that sales of light trucks – particularly the popular new models of passenger vans and utility vehicles, Detroit's marketing triumph of the decade, would probably continue to grow by about 300,000 annually.

What investors fear, however, is that even a relatively mild reduction in demand could have a devastating effect on the car makers' profits. Cars are, after all a highly capital-intensive industry, with very high fixed costs which vastly magnify small changes.

To this concern, Detroit believes it has a clearcut answer. US car companies learned many managerial lessons as a result of their near-devastation in the early 1980s. Perhaps the single most important one was: maximise flexibility by slashing overheads and fixed costs.

Detroit argues that lower overheads and greater operating flexibility would allow it to protect profits even in the event of a major decline in car sales. Mr Donald Petersen, Ford's chairman, points out, for example, that about 20 per cent of its US current sales are produced on overtime shifts. Thus it could withstand a fall of that magnitude without incurring any layoff or plant-closure costs.

GM, of course, is still well behind Ford and Chrysler in its cost-reduction campaign.

The contrast between its very strong results in Europe and its continuing marginal profitability in the US underlines this. GM's European operations were pinpointed much earlier and treated more aggressively in the company's cost-reduction drive. As a result, it now enjoys far more operating flexibility there than in the US. To quote one example, GM makes in-house only 50 per cent of the components it uses in Europe, but more than 70 per cent of what it puts into its US cars. This means that GM will have far less opportunity to squeeze its component makers in the event of a downturn than Ford, Chrysler or, above all, its Japanese rivals.

Unfortunately, as Mr Chuck Brady of Oppenheimer & Company, points out, "investors still believe the US auto companies are fat and lazy. They have zero experience of these companies being fit and lean before a recession hits. They won't really believe the claims until recession puts them to the test."

This leaves the third, and most important reason, for concern. Even in the absence of a severe recession, can US car makers remain competitive against the Japanese? At first sight this may seem an odd question, considering that Ford and Chrysler both increased their shares of the US market in 1988, while GM finally managed to arrest its steady decline. The US companies' market share gains were all at the expense of imports, so should Detroit and Wall Street still be worrying about the Japanese?

There are many reasons why they should. The most obvious are the "transplant" car plants which all of the major Japanese car makers have now built in the US. Transplant production, is now running at around 750,000 units a year and is set to rise to more than 2m within three years – an increase almost equivalent to 10 per cent of the US car and truck market.

So far the tranplants have "cannibalised" imports, especially imports from Europe, instead of cutting into the US carmakers' market shares.

With the Japanese makers increasingly moving their import mix towards up-market models, vans and light trucks, the danger is that they will start making cut into the American carmakers' most profitable large and luxury car ranges. The transplants, meanwhile, will be left to compete in the medium-priced range.

At present, Detroit can content itself with the vision of Japanese luxury cars eating away mainly at the market share of the European carmakers like BMW, Volvo and Saab. But what if the Europeans fight back? Or what happens, alternatively, once the Europeans are whittled to the ultra-luxury rump?

At that point, the US carmakers' new found managerial mettle managements' will really be put to the test.

Metalbox merger plan backed

By Maggie Urry in London

A LEADING London investment institution yesterday recommended its clients to vote in favour of plans by MB, the UK packaging group, to merge its Metalbox Packaging suhsidiary with Carnaud, the French packaging company. The move came in spite of a £25m rise to £835m ($1.47bn)in a rival cash offer for the offshoot.

Mercury Asset Management's clients hold 14 per cent of MB Group shares. The vote on the Carnaud merger will be held on Friday.

The suggested cash offer, which could be put to shareholders only through the MB board, comes from a consortium. Its shareholders inclnda Elders Investments, the investment arm of Elders IXL, the Australian brewing, finance and farming group run by Mr John Elliott; Ball Corporation, a US packaging company; and the individuals who would run Metalbox Packaging if the offer succeeded.

MB rejected the increased offer, saying it represented a totally inadequate price/earnings ratio. The packaging arm is expected to make a trading profit of £95m in its current financial year, to end March, and after a 25 per cent tax charge, a price of £835m would give a price/earnings ratio of 11.7.

The consortium's offer, first mooted at the end of last month at "not less than" £780m, was raised to a minimum of £810m last week. The £835m offer could still be increased if MB releases up-to-date trading information to the consortium. However, Mr Richard Ringoen, chairman of Ball Corporation, said yesterday that there was "not a lot of room" to raise it further.

At £835m the proposed offer is roughly equal to the value of the Carnaud deal to MB, which is a mixture of cash and shares. Under the Anglo-French plan, MB would retain a 25.5 per cent stake in the enlarged packaging group. MB says the consortium would have to pay a premium to gain full control.

Nevertheless, the consortium was fighting yesterday to persuade MB's shareholders to press their board to consider the rival offer.

The consortium said if its offer was accepted it would invest £230m in Metalbox Packaging over the next five years, countering suggestions that it would be too heavily indebted to continue research and development and capital expenditure programmes. MB said last night that its own investment plans would total more than double that amount.

MAM said its advice to clients could alter if there was a material change in circumstances before Friday.

Texas Eastern shares jump on bid

By James Buchan in New York

STOCK IN Texas Eastern jumped yesterday in response to an offer of $3.2bn for the Houston-based energy group from a smaller local gas pipeline group, Panhandle Eastern.

The $53-a-share offer, which was accepted by Texas Eastern after hurried negotiations over the weekend and Monday, stunned Wall Street with the value it places on Texas Eastern's gas pipeline and oil and gas properties.

It also surprised Coastal, a third Houston-based gas pipeline group, which launched a hostile bid for Texas Eastern late last month at just $42 a share or $2.5bn.

Coastal said yesterday it was considering several options, including increasing its bid or dropping it altogether. But Wall Street's professional takeover speculators, who bid up Texas Eastern's stock $8⅝ to $52¼ yesterday morning, were sceptical that Mr Oscar Wyatt, Coastal's cost-conscious chairman, would consider a higher offer.

"Panhandle Eastern'a price does seem high," said Mr Jim Bailey, a spokesman for Coastal, who pointed out that Texas Eastern faced substantial environmental liabilities.

The deal will involve dismembering and selling off Texas Eastern's oil and gas properties and other businesses and combining the pipeline networks to create the second largest US gas transmission group, with over 27,000 miles of pipeline serving the US Midwest and north-east.

It confirms a trend towards consolidation in tha industry, which is just emerging from a tumultuous period of deregulation and unstable gas markets.

Mr Robert Hunsucker, chairman of Panhandle Eastern, said: "We expect the combination to result in significant operating eynergies and appreciahly enhanced operating income of the combined companies starting in 1990."

The offer, which is 80 per cent in cash and 20 per cent in the form of Panhandle Eastern stock, will plunge the group into debt.

Panhandle Eastern intends to sell all but Texas Eastern's 9,500-mile pipeline network. Analysts believe its valuable North Sea assets, other gas and refining businesses and property, including 22 blocks of downtown Houston, could be worth up to $2bn.

The key to the deal is Texas Eastern's two pipelines to New York, New Jersey and New England where the industry is banking on a big and rapid increase in demand for gas for power generation.

Paris prosecutor's office to investigate Beghin-Say

By George Graham in Paris

FRANCE'S public prosecutor's office has opened an investigation into a FFr860m ($157m) loss recorded in 1987 by the sugar group Beghin-Say, part of the Ferruzzi empire of Italian foods and finance magnate Mr Raul Gardini.

The Paris prosecutor's office yesterday asked the financial squad of the judicial police to look at the transaction, which is already being studied by the Commission des Operations de Bourse (COB), France's stock market regulator.

The inquiry covers the purchase by Beghin-Say, in which Mr Gardini controls 56 per cent of the voting rights, of a 7 per cent stake in Montedison, the Italian chemicals company. At the time, Mr Gardini was seeking to gain control of Montedison.

The stake was acquired, according to Beghin-Say's accounts, for FFr1.91bn, and then swapped after the stock market crash of 1987 for the 12 per cent stake held in St Louis, a rival French sugar producer, by European Sugar, a wholly-owned subsidiary of Mr Gardini's group, and a cash supplement, giving a total value of FFr1.05bn.

The COB, which was last night unaware of the prosecutor's initiative, is on the point of completing its own inquiry into the transaction.

Beghin-Say was also last night surprised by the prosecutor's investigation, but said that it remained "serene." The opening of the police inquiry appears to reflect a tougher line by France's judicial authorities, who last week charged five people with insider trading just before the purchase by Pechiney, the French state-owned aluminium producer, of the US packaging group Triangle Industries. The five were set unprecedentedly high bail demands totalling FFr16.5m.

The COB has a mediocre record in securing convictions on the charges it has asked prosecutors to file. Its own investigative powers are to be substantially increased by new legislation due to be presented to parliament this spring.

Ausimont bid fails, Page 24

Bowater bids for Chamberlain

By Philip Coggan

BOWATER INDUSTRIES, the UK packaging and industrial products company, yesterday made a surprise £81m ($143.7m) bid for Chamberlain Phipps, the UK shoe components and adhesives group, topping a rival recommended offer made last week by Evode, the plastics and chemicals business.

A morning flurry of share-buying by its broker, Warburg Securities, gave Bowater a stake of around 7 per cent; its rival, Evode, has 4 per cent.

The 220p-per-share cash offer (with a loan note alternative) from Bowater compares with an Evode offer, in a mixture of ordinary and convertible preference shares, worth around 198.6p per share. Chamberlain shares closed up 29p at 218p yesterday.

The Chamberlain Phipps board issued a holding statement saying it was considering its position, but it is believed that directors are still strongly in favour of the Evode merger.

Mr Andrew Simon, Evode's chairman, said he was disappointed that a rival offer had been launched but he stood firmly by the industrial logic of a merger with Chamberlain.

Bowater said that Chamberlain's adhesives business would link with its coating and laminates division, largely based on Rexham of the US, acquired in late 1987.

Bowater said that it had followed Chamberlain Phipps closely for some time but assumed that the company's new chairman, Mr David Chamberlain, would want to preserve its independence. However, the recommended bid from Evode indicated that the company was now up for sale.

Background, Page 31

Local London receives £110.9m offer

By David Waller in London

PRIEST MARIANS, a UK property company with interests in London's West End, yesterday made a £110.9m ($196.8m) cash bid for Local London Group, the business centre company which is itself in the throes of a £77.7m bid for Marina Development Group.

Within hours of launching the bid yesterday morning, Marians' position looked almost impregnable, after a dawn raid that left around 50 per cent of the target company's shares either in its hands or committed to the bid.

James Capel, the stockbroker acting on behalf of the predator, went into the market and bought 3.8m shares, or just under 20 per cent of the target company's equity. The bid was made with the backing of Brent Walker, the property, drinks and leisure group, which pledged its 29.9 per cent stake in Local London to Marians.

The bid was timed to frustrate Local London's own takeover ambitions, which seemed close to fruition last Friday when it took its stake in Marina to 29.9 per cent. That, together with shares already pledged to the bid, gave it 46.9 per cent of its target.

Marians' bid is conditional on the bid for Marina not going through and is pitched at 550p a share in cash, an 11 per cent premium to Monday's price. Local London's shares jumped from 494p to 541p, while Marians' gained 10p to close at 439p.

Details, Page 31

Suez adjusts ties with Italian financier

By Paul Betts in Paris and Alan Friedman in Milan

COMPAGNIE Financière de Suez, the French privatised financial group, is about to restructure its ties with Mr Carlo De Benedetti, the Italian financier.

Suez, which defeated Mr De Benedetti in the battle for control of Société Générale de Belgique, plans to increase its stake in Cofide, Mr De Benedetti's principal Italian holding company. At the same time, however, Suez is planning to withdraw from Cerus, Mr De Benedetti's French operating subsidiary.

The switch will see Suez increase its stake in Cofide from about 4 per cent to around 10 per cent. The French group holds a 10 per cent stake in Cerus, which is expected to be dilnted to around 7 per cent as a result of the proposed merger between Cerus and Dumenil-Leblé, the French financial services group.

This merger appears to be the main reason for the decision of Suez to restructure its shareholdings. Suez felt it had become difficult to remain a shareholder of Cerus since Dumenil-Leblé is a direct competitor of Banque Indosuez, the principal banking subsidiary of Suez.

However, the proposed restructuring is not expected, at this stage at least, to weaken the links between Suez and Mr De Benedetti. Apart from Suez increasing its stake in Cofide, Cerus continues to hold a 4 per cent stake in the French privatised group.

In Milan last night aides to Mr De Benedetti insisted that the proposed merger between Cerus and Dumenil had nothing to do with Suez's decision to restructure its holdings in the De Benedetti group.

"It is a matter of record that Suez, as a Cerus shareholder, gave its approval to the Dumenil deal. There is no competition between Suez and Dumenil and this is not a problem," said Cofide.

Cofide said it was aware of plans for Suez to raise its stake in Cofide to 10 per cent, but that Suez was not expected to sell all its shares in Cerus.

Italian banks join up for first division promotion

David Lane reports on a pioneering rationalisation

Italy's banking system is taking an important step towards rationalisation with the acquisition by the Cassa di Risparmio di Roma, the country's second largest savings bank, of a controlling 86 per cent stake in the state-owned Banco di Santo Spirito.

During the past five years the central bank has prodded untiringly to encourage concentration and bigger banks. But until now the response from a fragmented banking system comprising 1,100 different credit institutions had been just a small number of mergers involving minor banks.

The deal under which Santo Spirito passes from Istituto per la Ricostruzione Industriale (IRI), the state holding corporation, to Rome's savings bank is the biggest post-war change of ownership.

The two medium-sized banks are ranked separately towards the bottom end of the world's top 200 banks. The resulting merged institution will win a place in the top 100.

Rankings published last year showed Risparmio di Roma in 176th place with assets of $20bn and deposits of $12.7bn at year-end 1987. Santo Spirito was six places lower with assets of $19.8bn and deposits of $17.2bn.

Now large Italian banks face a new competitor whose combined assets of more than $40bn, Italian network of more than 400 branches and staff of 10,400 place it firmly in the country's top 10.

Opposition to the deal came from political quarters rather than banking circles. Banks are part of Italy's political spoils system and the Risparmio di Roma falls to the Christian Democrats. The prospect of a vastly enlarged savings bank was not easily accepted by the Socialists.

Considerable effort was needed to convince the various interest groups of the need for a merger. A senior executive at the savings bank said that separately the two banks would lose ground after the 1992 EC internal market reforms, while together the prospects were good. This message reached the political decision-makers.

With political obstacles overcome, the deal allows two aims to be met. First, an important step is taken in the much-needed rationalisation of the Italian banking system, whose example may encourage other similar operations. Second, with the funds obtained from the sale, IRI can finance the recapitalisation of Banco di Roma, one of the three banks of national interest which it controls.

When it was announced last week that Banco di Roma will raise L1,040bn ($771m) of fresh capital through an issue of shares and bonds, IRI committed itself to underwriting the whole operation. The sale of its stake in Santo Spirito should provide most of the funds that are needed to put Banco di Roma's share capital and ratios in order.

Exactly how much the disposal will earn IRI has still to be decided. The Risparmio's senior executive noted that although a provisional price has been agreed, the final figure will depend on a valuation to be undertaken by international experts. Banco di Santo Spirito's shares are being traded on Italy's third market at L1,800, valuing the bank at L1,060bn.

In contrast to Banco di Roma, the city's savings bank has no difficulties with its capital ratios, and its strong asset base allows space for investment and growth. It is financing the acquisition from reserves and cash flow.

Risparmio di Roma went against the trend in 1987 and returned results better than the previous year. Gross operating profits were L467bn, against L462bn in 1986, and net profits rose from L73bn to L85bn. And last year's results should show a 10 per cent improvement.

Santo Spirito has performed less well – its 1987 post-tax profits of L47bn were slightly down on the previous year. The savings bank's senior executive noted that growth in deposits and lending at Santo Spirito are slower than at the Risparmio.

Management at the savings bank wants returns on its investment and hopes that imposition of its more businesslike approach will quickly produce results.

Albeit on a smaller scale, Cassa di Risparmio di Roma has experience of managing mergers. Eighteen months ago it acquired the 25-branch Cassa di Risparmio Molisana-Monte Orsini which had run into difficulties. Since then, by encouraging early retirement, the bank has made significant cuts in middle and senior staff. Banco di Santo Spirito will, however, be harder to digest.

Itab gains new owner and chairman

By David Lascelles, Banking Editor

ITAB, the Italian-owned London consortium bank, is to have a change of ownership and a new chairman.

Mr Patrick Brenan, a former director of Hambros Bank and one of the people assigned by the Bank of England to sort out the stricken Johnson Matthey Bankers, becomes chairman.

He replaces Mr Mario Bortolussi who was deemed not to be "fit and proper" by the Bank of England last year because of his past association with Mr Roberto Calvi, the controversial financier who was found hanging under Blackfriars Bridge in 1982. Two British non-executive directors are also joining the board.

Cassa di Risparmio di Torino, the Turin-based savings bank which owned half of Itab, is buying out the other owner, the Credito Romagnolo, making it a fully-owned subsidiary.

CRT will also increase Itab's share capital from £5m ($8.8m) to £20m, and its loan capital from £2.5m to £10m. Itab's name is to be changed to London Italian Bank Limited.

Increased lending lifts Swedish bank profits

By Sara Webb in Stockholm

SKANDINAVISKA Enskilda Banken and Svenska Handelsbanken, Sweden's two largest commercial banks, yesterday reported higher profits for 1988 helped by increased volumes in lending. Both banks raised their dividends and announced bonus issues to shareholders.

S-E Banken, which is tha larger of the two banks, said its group operating profit climbed 16 per cent to SKr4.67bn ($742.4m) from SKr4.04bn in 1987, while total operating income rose by 15 per cent to SKr10.12bn.

The Swedish benking operations showed a 21 per cent jump in operating profit to SKr3.72bn and a 17 per cent increase in total operating income to SKr7.63bn.

Operating costs for the group rose by 12 per cent to SKr5.04bn, boosted by expansion overseas and the setting up of branch offices in London, New York and Hong Kong. Lending losses for the group jumped 58 per cent to SKr378m.

The board proposed raising the dividend from SKr4.25 to SKr5.1 for its class A shares and said it would create a new class of share in readiness for S-E Banken's introduction on foreign stock exchanges.

S-E Banken plans to double its share capital to SKr2.57bn by means of a bonus issne using funds from its legal reserve as well as a substantial write-up on its real estate.

Handelsbanken's group operating profits rose by 24 per cent to SKr3.68bn from SKr2.98bn in 1987, a year when the bank was badly hit by losses in the options market.

Profit for the Swedish banking operations climbed 28 per cent to SKr3.35bn. Handelsbankan said interest income increased by 15 per cent to SKr4.41bn due to the strong increase in lending, while income from commissions and bond sales jumped 38 per cent to SKr1.87bn. Total costs rose by 15 per cent to SKr2.93bn.

The board proposed increasing the dividend from SKr3.6 to SKr4.5 per share and announced a bonus issue of one new share for every three held.

INTERNATIONAL COMPANIES AND FINANCE

Overseas earnings prop Deere in opening quarter

By Roderick Oram in New York

DEERE, the world's largest maker of farm equipment, reported a sharp increase in earnings from operations with a strong foreign performance offsetting lower North American retail sales.

Net profits for its first quarter to January 31 were $48.4m or 65 cents a share, against $67.5m or 99 cents, but last year's figure included a $28.7m gain from a tax accounting rule change and $9.8m from tax loss carryforwards.

Worldwide manufacturing and marketing operations, excluding unconsolidated subsidiaries, turned in pre-tax income of $21.3m, up sharply from $9.1m due to improved overseas operations.

Total sales rose 9 per cent to $1.14bn from $1.05bn on a 7 per cent rise in manufacturing unit volume. North American retail sales of agricultural equipment were lower than a year earlier when heavy manufacturers' discounting boosted volume.

Sales of lawn and grounds care equipment were also lower while industrial equipment was flat. Overseas sales of farm and industrial equipment were flat.

During January Deere introduced a major new line of combines, large tractors and other equipment. Manufacturing start-up and shipping delays and higher manufacturing costs shaved some $75m from forecast first-quarter shipments. The company hopes to make them up during the current quarter.

Deere is lifting worldwide production volume 14 per cent this year. In North America, farmers' incomes are strong while rising land values have reduced debt. More land is coming into production to help rebuild grain stocks depleted by last summer's drought.

Analysts express concern, however, that the unusually dry weather this winter could harm winter wheat crops and affect other crops later in the year. If farmers turn more cautious as a result, Deere might have to cut production and inventories.

Montedison's Ausimont bid fails

By Alan Friedman in Milan

ITALY'S Montedison group has failed to secure 100 per cent control of Ausimont, its Wall Street-quoted specialty chemicals subsidiary.

As of yesterday Montedison had secured 88.2 per cent of Ausimont.

Montedison had come under fire from independent directors of Ausimont who rejected as inadequate the group's $35 a share offer for minority Ausimont stock.

Montedison launched its $35 offer in January to buy the 27.4 per cent of Ausimont it did not control. Montedison needed to obtain at least 95 per cent control of the Dutch-registered Ausimont.

Under Dutch law this is the level at which minority shareholders can be forced to sell their stock.

Last Thursday Oppenheimer, the New York investment house, said it held 5.2 per cent of Ausimont, sufficient to block Montedison under Dutch law.

Oppenheimer said it viewed the $35 offer as unacceptable and would take action to block the transfer of Ausimont's Dutral subsidiary to Enimont, a new Italian joint venture chemicals concern. Oppenheimer confirmed yesterday that it considers the Dutral transfer as being against the best interests of Ausimont shareholders.

Montedison yesterday said it had no comment to make on the Ausimont affair. In New York, Mr Jim Harmon, a senior executive at Wertheim Schroeder and one of four outside Ausimont directors who criticised the $35 offer, said the outcome was "a terrible tragedy for all concerned."

Mr Harmon claimed "an American or British company would have never let the situation get so far – the present state of affairs does not benefit shareholders, does not benefit Montedison because they have not got 95 per cent and has solved nothing."

It is thought likely tha remaining minority shareholders of Ausimont will seek initially to obtain a higher price than the $35 in Montedison's offer, but the Italian company had described the offer as final.

There is also uncertainty about whether Mr Raul Gardini, chairman of the Ferruzzi-Montedison group, will try to have Ausimont shares taken off the New York Stock Exchange.

The most widely held view is that Montedison could face lawsuits in New York relating to the Ausimont affair, which would imply several months of delays.

Steady growth at Hewlett Packard

By Louise Kehoe in San Francisco

HEWLETT-PACKARD yesterday reported an 8 per cent growth in net earnings and a 21 per cent increase in revenues in its first fiscal quarter ended January 31. The group was boosted by strong sales of personal computers and computer workstations.

Net earnings for the quarter were $193m or 83 cents a share, up from $179m or 71 cents per share. The number of common shares outstanding was reduced by about 20m through stock repurchases which reduced the company's cash balance.

Revenues totalled $2.7bn, up from $2.2bn in the same period last year. US sales rose 12 per cent to $1.2bn, while international sales were up 31 per cent to $1.4 bn.

New orders booked during the quarter totalled $3bn, up 23 per cent from $2.4bn in the first quarter last year. US orders were up 17 per cent while international orders grew by 29 per cent.

General Mills may sell unit

GENERAL MILLS, the US foods group, is considering selling its Vroman's Frozen Novelty business.

Mr H. Brewster Atwater, chairman, said Vroman's would have about $100m in sales in fiscal 1989. But he added that the unit, which makes Betty Crocker Brownie Sundae, Gold Rush ice cream bar and Yoplait soft frozen yogurt, was also losing money.

General Mills also makes regular Yoplait yogurt, which is not included in the unit being considered for sale.

Chile's privatisation scheme under fire

By Barbara Durr in Santiago

THE CHILEAN military Government's extensive privatisation scheme is coming under increasingly heavy fire from the opposition.

As the opposition Coalition of Parties for Democracy gears up for this December's elections, it has promised privatisation will be one of its top campaign issues and has vowed to annul all privatisations made after last October's plebiscite.

The Government, bent on paring down the state sector, recently announced plans to sell part or all of another 12 state companies. Sixteen public sector companies have already gone completely private.

The opposition argues that the Government's post-plebiscite privatisations are politically illegitimate, given voters' rejection of Gen Augusto Pinochet. Opposition leaders charge that the underlying strategy of the regime is to reduce an incoming democratic government's room for manoeuvre and its revenue sources.

Mr Ricardo Ffrench-Davis, a prominent opposition economist, says the Government's haste to divest this year will fetch lower prices and place monopolies for public services in private hands without sufficient safeguards on fair pricing and service. He admitted the renationalisations could be traumatic, and that "we don't need traumas" as Chilean democracy begins anew.

His advice to foreign investors, interested in companies to be privatised, such as the national airline Lan Chile, is to heed the opposition's public warnings.

The Government contends it is only proceeding with plans laid long before October, and that Gen Pinochet's plebiscite defeat hardly means a repudiation of its free market policy.

Of the 11 companies currently in the list for privatisation by the state holding company, Corfo, nine have already been at least partly sold to private shareholders. The newly-announced intention to privatise partially the Ministry of Mines' National Petroleum Company (Enap) has, however, intensified the dispute.

The Minister of Mining, Mr Pablo Baraona, said he would sell up to 30 per cent of Enap's shares to workers, pension funds and the public. Unions and even retired Gen Gustavo Leigh, a former junta member, have criticised the move.

Mr Baraona is also considering privatisation of the National Mining Company (Enami), which does little mining but processes the ore and concentrates of Chile's small and medium-sized miners.

For now, the Minister has only decided to restructure Enami, separating its industrial and commercial divisions. But these could be sold, he hinted. This step would also be opposed by the National Society of Mining, which groups small and medium sized private miners who use Enami.

Suspicions that the Government will go on a "end of the party" privatisation spree are so intense that officials have had to deny repeatedly that they intend to privatise Codelco, responsible for some 80 per cent of the country's copper production. Its sale is prohibited by the constitution.

It is far from certain that a new democratic government would move wholesale against all privatisations dating after last October. Mr David Gallagher, managing director of Asset Chile, the investment bank which has handled several debt-equity swaps, said: "I don't see a new government going against the trend towards privatising all over Latin America and the rest of the world."

More likely it will select companies that are highly disputed, such as Enap, or where monopolistic or other abuses can be proven, even if the privatisation came before the plebiscite.

A potential political obstacle to renationalisation could be the vast number of new worker shareholders. Privatisations have increased the number of shareholders by 200,000.

Yet, the Government's key justification for divesting – to unleash greater private investment that has been held back by the public sector – is challengeable.

Mr Ffrench-Davis says a fall in public investment over the past few years has not been compensated by private initiatives. The average rate of investment between 1974 and 1988 was only 15 per cent, compared 20 per cent in the 1960s.

Much of recent investment has come through debt swaps, which have reduced debt but diverted resources away from creating new productive capacity. The opposition intends to change debt swap rules to bring in more fresh capital.

According to critics of the Government, the glamorous statistics of Chile's past five years of steady growth at more than 5 per cent annually are a mirage. After the economic crisis of 1982-83, the recovery has largely been based on installed capacity, they say.

Government economists agree the investment rate is dangerously low but they insist that more privatisation will boost it. Mr Cristian Larroulet, chief of staff at the Finance Ministry, says the money earned from privatisation is also partly channeled to public works that help foster investment. Divestiture has put $600m in the Chilean Treasury since 1985, and another $320m may come from remaining sales.

It remains unclear if the opposition's objections will discourage investor interest in the sales planned for later this year. The tender for Lan Chile, due soon, is expected to give an indication.

ONCE, in the eye of the hurricane

Tom Burns on the Spanish Association for the Blind's ambitions

"We are in the eye of a hurricane and it is all terrific because our bosses are blind," says a harassed press assistant as he fields phones calls from financial reporters questioning him about ONCE's investment plans.

The crack sounds in the worst possible taste because ONCE — Organizacion Nacional de Ciegos Espanoles — is Spain's Association for the Blind and the press assistant is one of the few people at its Madrid headquarters who can see. But black humour permeates from the top down.

"We must be able to see beyond the tip of our noses because we are blind," says Mr Miguel Duran, ONCE's managing director, 33 years old and sightless from birth.

It is Mr Duran who has pitched the organisation, with its more than 30,000 blind and handicapped members, into the eye of the hurricane. Last month he spent Pta3.9bn ($340m) of ONCE money acquiring stock in companies controlled by construction tycoons Mr Alberto Alcocer and Mr Alberto Cortina's Grupo Construcciones y Contratas (Grucycsa). Now he is considering spending a further Pta20bn to buy into Banco Central and Banesto, the two Spanish banking giants that agreed to join forces last year.

The spending spree has turned ONCE, a venerable 50-year-old institution of blind and disabled lottery ticket-sellers, into a key player in a merger that looks increasingly embattled.

So far Mr Duran has written to the chairmen of both Banesto and Banco Central declaring ONCE's interest in buying stock from their respective *autocarteras*, the portfolio a Spanish bank holds of its own shares, and he expects to be meeting them soon. The Pta20bn war chest he is talking about would buy ONCE some 2.5 per cent of each bank's stock.

The rub is that, under his agreement with Grucycsa, Mr Duran will syndicate whatever equity ONCE acquires in the banks with Cartera Central, the share portfolio that Grucycsa, with the backing of the Kuwait Investment Office (KIO), controls in both Banesto and Banco Central.

The additional support of the ONCE equity would convert Cartera Central into a formidable presence in the two banks, for the portfolio company already holds close on 10 per cent of their joint capital. Last week ONCE bought nearly 0.3 per cent of Banco Bilbao Vizcaya's *autocartera*. BBV has become Spain's biggest bank following the merger of Banco de Bilbao and Banco de Vizcaya early last year.

Suddenly everyone, from the governor of the Bank of Spain downwards, wants to ask Mr Duran about ONCE's strategy. Cartera Central is viewed as a hostile intruder by some members of both the Banesto and the Banco Central boards and ONCE's sense of timing and its choice of partners as it launches into the capital markets has set everybody talking.

Casting ONCE as a peacemaker, and joking, too, about the eye of the hurricane, Mr Duran says the association may be "with" Cartera Central but it is not "against" anybody. "We just want the merger to go through because Spain needs a big banking and industrial group and we want to be part of it."

Power talk and boardroom politics come naturally to Mr Duran, for he and his executive team, all of them blind, are in the midst of the second revolution that ONCE has undergone in little more than five years. The first was to increase income dramatically and the second one is to diversify assets that would make any financial planner's mouth water.

Buying ONCE lottery coupons, mixing charity with a flutter, has always been a habit among Spaniards, but the parameters of the business have changed utterly. In 1982, the association earned Pta30bn from coupon sales; in 1984, Pta108bn; and last year the income was up to Pta230bn, Pta46bn more than 1987.

The new team (Mr Duran became managing director in 1986) took over in 1982, when ONCE's government-appointed trustees changed the association's statutes to allow its members to elect its executive board directly. In quick steps, the newcomers, all very young, increased the price of the coupons and the prize money, made the draws nationwide instead of provincial and embarked on an aggressive advertising campaign of radio jingles and slick TV ads that last year had a budget of Pta2.5bn.

Mr Duran justifiably claims that ONCE — an association, he notes that is "of" and not "for" the blind — is uniquely efficient and profitable and would "please people like Mrs Thatcher who want to privatise social services."

ONCE's cash cow is its network of 22,000 lottery-sellers, 14,000 of them blind and the rest handicapped, who hawk the Pta100 coupons five days a week on street corners all over Spain. Top prizes every day are Pta2.5m and there is a bumper Pta100m prize on Fridays. Business is brisk and the lottery-sellers, who are guaranteed Pta90,000 a month — twice the legal minimum wage — and take home an average of Pta135,000, have usually sold out by lunchtime.

Gambling, a lucrative business in Spain, is "just another economic activity," according to Mr Duran, and he claims that ONCE has an 8 per cent quota of the market. However, competition from other national lotteries, in particular from two run by the finance ministry, and from the one-armed bandits in every Spanish bar and cafe, has prompted Mr Duran to widen ONCE's horizons.

Under ONCE's constitution, 40 per cent of its financial assets must be in in fixed-interest, government-linked loans and the income earned over the past five years has allowed Mr Duran to lay aside sufficient investment in state bonds and other instruments to cover amply its 15,000 pensioners and its 2,500-odd students at the blind schools it supports. He says he now wants ONCE's financial muscle to be "productive and creative."

A lawyer and a specialist in braille production, Mr Duran began testing the markets last year and soon found himself wined and dined by Spain's financial top brass. "They thought we would be a sneak at first," he recalls. "They soon discovered that we may be blind but we are not suckers."

Mr Duran eventually chose Grucycsa because "they are active and control front-line companies." Last month's Pta3.9bn investment in the holding bought ONCE 2 per cent shareholdings in Banco Zaragozano, in the construction company Focsa and in the cement manufacturer Valderribas, which are quoted on the Madrid Bolsa.

Within three weeks of buying the shares, the overall stock market value of ONCE's investment had risen by Pta450m. However, higher returns on capital are only part of Mr Duran's concern: "We have adopted the culture of long-term wealth, we are not speculators and we don't want short-term riches."

ONCE's managing director says he wants the association to be present at the "centres of power" and in this sense Grucycsa and the Cartera Central syndication are the ideal vehicles to lead the blind to the top table.

Already there is an ONCE nominee on the boards of Valderribas and of Focsa and there are two on the board of Banco Zaragozano. However, the real prize is Banco Central and Banesto, for the financial and industrial interests of the two banks combined, says Mr Duran, represent 6 per cent of Spain's GDP.

Why do Mr Duran and ONCE want to play at tycoons? The managing director's answer is vehement: "We are sick of people ignoring the 2 per cent."

The "2 per cent" is the proportion of jobs that large companies should allocate to handicapped persons, according to Spain's labour legislation, and Mr Duran wants ONCE funding to ensure that the guidelines are observed. "Blind people should not be condemned to selling lottery tickets and nor should companies be hiring them only as telephone operators."

Mr Duran talks of sponsoring blind people through MBA programmes so that they can run the empire he foresees for ONCE. Do top ONCE executives have to be blind? "Preferably yes," says Mr Duran. "We wouldn't want to scratch their eyes out." The press aide who had sat mute through the interview laughed nervously.

Trust Bank edges higher in first half

By Jim Jones in Johannesburg

TRUST BANK, South Africa's fifth-largest banking group, has followed competitors in blaming the authorities for the narrower lending margins that inhibited profit growth.

In the six months to December 31 1988, Trust increased its total lending to R10.95bn ($4.41bn) from R8.58bn at the end of June and total assets to R16.37bn from R13.53bn. Revenue growth failed to match that of assets and the bank has disclosed an interim profit after tax and transfers to inner reserves of R25.9m, against R24.0m in the corresponding period of 1987. For the past financial year as a whole the figure was R57.7m.

Mr Chris van Wyk, the managing director, attributes the comparatively small profit increase to the authorities' reluctance to allow prime overdraft lending rates to rise in line with increases in deposit rates.

Analysts say that was a political decision, as the Government was reluctant to allow interest rates to rise ahead of October's municipal elections. Mr van Wyk says the situation improved in November.

AECI lifts sales 25% to R4.08bn

By Jim Jones in Johannesburg

AECI, South Africa's largest diversified chemicals group, lifted sales by a quarter in 1988, helped by stronger domestic demand and better prices in export markets. It expects further growth this year.

The year's turnover increased to R4.08bn ($1.64bn) from R3.28bn, the trading income before tax and financing costs was R473m against R369m and the pre-tax profit rose to R398m from R303m.

Mr Mike Sander, managing director, says all divisions did better than in 1987, although sales of chlorine-based organic chemicals were affected by technical problems at the Coalplex plant during the first six months.

That affected AECI's ability to export PVC plastics, but sales recovered in the second half as international prices of chemicals and plastics increased and the rand/dollar exchange rate favoured exporters. Export sales rose by 33 per cent, although export volumes were little changed.

Earnings rose to 165 cents a share from 138 cents.

Wormald back to profit after rationalisation

By Chris Sherwell in Sydney

WORMALD International, the Australian-based fire protection group which suffered heavy losses last year following the 1987 share market crash, has returned to profit following a major rationalisation.

Figures for the six months to December, released yesterday, showed an attributable after-tax profit of A$4.98m (US$4.08m) against a loss of A$49.2m in the same period of 1987. The result was achieved despite a 13 per cent fall in revenues to A$521.5m.

The "new" Wormald also reported that its net debt position was A$115m, down from A$309m in June and A$545m in November 1987. It said the figure would be reduced further as a result of additional divestments and current profit performance.

The group is now 44 per cent owned by Chase Corporation of New Zealand and its subsidiary Reil Corporation. Another 21 per cent stake is held by AMP Society, Australia's largest institutional investor.

The ownership structure emerged last October from a protracted wrangle which began in the wake of the market crash a year earlier. Major losses were suffered as a result of the pre-crash purchase of Sunshine Australia, which had a significant stake in Wormald.

The group's biggest rehabilitation move was the sale of its security operations in Australia, the UK, the US and Singapore to Racal Electronics of Britain. It also plans to sell its stake in the consortium building submarines for the Australian Navy.

Mr Bob Mansfield, managing director and chief executive, said yesterday the group remained the largest international fire protection company in the world, with operations in 30 countries, and was now operating with reduced overheads and a streamlined management structure.

He said it was experiencing profitable trading in all regions, had healthy forward orders and was "on course" to achieve 20 per cent return on shareholders funds over the next three years. Directors declared an interim dividend of two cents a share, unfranked.

● Chase Corporation's 89 per cent-owned Hanimex Corporation, the camera products group it has put on the market, yesterday blamed the strong Australian dollar for restricting after-tax profits growth to 5 per cent in the first half.

BNZ acting chairman resigns job

By Dai Hayward in Wellington

THERE WAS further boardroom turmoil in the 87 per cent government-owned Bank of New Zealand — NZ's largest bank — yesterday, as Mr Rob Campbell, former deputy chairman and now acting chairman, resigned his position. This came only four days after the resignation of the previous chairman, Sir Ron Brierley. Mr Campbell will remain as a member of the board.

Acting rapidly to dampen adverse reaction, Mr David Caygill, the finance minister, announced two days earlier than planned the appointment to the board of Mr Frank Pearson as chairman and Ms Susan Lojkine as deputy chairman.

There have obviously been strong differences of opinion between the Government and the board — and among different board members — over the perception of the bank's financial state and its potential readiness for sale.

Mr Campbell believes the major issues were the real financial state of the bank and the Government's sale programme.

INTERNATIONAL COMPANIES AND FINANCE

Norwegian drugs group launches Japanese arm

By Karen Fossli in Oslo

DYNAL, the joint venture unit of Norway's Dyno Industrier and the Norwegian Apothekernes Laboratorium (AL), has established Nihon Dynal KK, a new subsidiary in Japan, with the Japanese Veritas Corporation, which will be responsible for developing Dynal's pharmaceutical products.

Dynal is to control 60 per cent of the new company while Veritas Corporation will take the balance. A Japanese scientific advisory board has also been established.

The Norwegian company's primary product, Dynabeads, is based on special particles used in bio-technological separation, a technique used in the diagnosis and treatment of illness. It is used to prevent the body from rejecting *transplanted* organs, or in treating bone marrow cancer.

Dynal has also developed a *system for separating* cancerous cells from healthy ones. It is based on Dyno's "particle" technology and AL's expertise in immunology and cancer research.

The Norwegian venture was established three years ago to develop, produce and market bio-technological separation systems based on state of the art expertise. It expects considerable growth over the next few years.

Meanwhile, Dyno Industrier said it had proposed a dividend payment for 1988 of NKr8.20 per share, or dividend shares. Last week the company announced profits of NKr320m ($48m) on sales of NKr8.6bn for 1988.

Exportfinans reports a NKr8m rise in income

EXPORTFINANS, the financing and export credit institute of the Norwegian commercial banks, experienced a rise in income in 1988 to NKr62m ($9m) from NKr54m last year, writes Karen Fossli.

By the end of last year, assets increased to NKr25bn as disbursements rose to NKr3.5bn compared with NKr3bn in 1987.

Nearly NKr1bn in disbursements financed exports from the mechanical industry, mostly for maritime equipment, while NKr1bn financed the export of ships built at Norwegian shipyards.

More than NKr1.3bn, or one-third, financed internationalisation projects, or the establishment of Norwegian sales offices and production facilities abroad. Approximately NKr1.1bn, or one-third, in credits was disbursed for governmental schemes.

Exportfinans said that in 1988 it borrowed in the domestic market for the first time in five years.

More than NKr6.5bn was raised in the international capital market in various currencies which were swapped to US dollar loans with floating interest rates.

Finnish pulp and paper group up FM639m

By Olli Virtanen in Helsinki

METSA-SERLA, the Finnish forest products group, reported a two-and-a-half-times profit increase before appropriations and taxes from FM380m to FM1,019m ($245m) in 1988.

The group's net sales increased 8.5 per cent to FM7.6bn during last year. Profit after financial items rose to FM711m, representing 9.4 per cent of net sales, against FM261m and 3.7 per cent in 1987.

Net financial expenses totalled FM351m, down from FM473m the year earlier.

Earnings per share rose to FM45 from FM16. Growth was mainly due to strong demand in forest products, particularly in pulp.

● The Canadian lumber industry expects a 10 per cent drop in softwood lumber exports to the US this year, writes Robert Gibbens in Montreal.

This would mean a drop in US market share to around 20 per cent from a peak 33 per cent in 1986.

One major factor in the continuous decline since 1986 has been the 15 per cent surcharge on exports imposed by Canada in early 1987 to forestall a US duty.

But US housing stocks have also been running at lower levels because of market saturation in some areas and steeply higher mortgage rates.

The industry is trying to renegotiate the 15 per cent surcharge with Canadian and US Governments. The tax was exempted from the Canada-US free trade deal effective last month.

Royal Trust Bank to pass dividend as assets up 3.3%

By John Wicks in Zurich

ROYAL TRUST BANK (Switzerland) of Zurich, is to pass a dividend in respect of last year, following a major reduction of credit risks.

Net profits of the bank, whose majority shareholder is the Toronto-based Royal Trustco, dropped from a 1987 record of SFr18.6m ($12m) to only SFr1.5m, while total assets showed only a slight increase of 3.3 per cent, to SFr3.1bn.

While gross income went up in 1988 from SFr196.4m to SFr202m, the bank recorded "losses, depreciation and provisions" of SFr30.7m, compared with under SFr13.2m for the previous year. This reflected large-scale write-offs and risk provisions on the bank's loan portfolio.

As part of this move, all Comecon assets have been sold and the amount of remaining credit to less-developed countries reduced to only 0.2 per cent of the total portfolio. The management now foresees a "healthy rate of growth on a calculable risk basis."

Total equity at the end of 1988 was of SFr265m. This is seen as a solid capital base and a sound capital-assets relationship, providing "an ideal foundation on which to base further expansion."

Schindler firm on profits forecast

SCHINDLER, the Swiss lift and escalators company, says 1988 losses on the part of its affiliate, Also, will not affect the group's profits forecast for the year of "at least SFr80m ($53.3m)," writes John Wicks.

The Swiss lift group acquired a controlling stake in Also last July after the international supplier of personal *computer systems showed 1987* losses of SFr7m on turnover of SFr185m.

Three German subsidiaries – Also ABC Trading, Also Comsyt and Also Consult – booked operating losses last year totalling DM23m ($12.5m). *This was equal to more* "80 per cent of the operating loss of the Also Group," says Schindler.

These three companies will *cease operations* at the end of next month. German business, which had accounted for more than half the total Also sales, is to be concentrated in the Berlin firm, Dr Dohrenberg. This company is to expand its activities, as is Scheidegger, the Swiss subsidiary and leading European specialist in clerical training courses.

Schindler, which admits it is "surprised" at the *German* losses, will write off Also goodwill "much faster than foreseen by company guidelines."

It has replaced Also management and taken what it calls energetic steps to improve Also's operations at home and abroad.

Since Schindler has a voting majority but no capital majority in Also, the affiliate's figures are *not consolidated*.

Open letter to MB Group Shareholders.

Ball Corporation
345 South High Street, Muncie, Indiana.

Dear Shareholder,

We have written to Dr Brian Smith, Chairman of MB Group plc, on behalf of Newco offering to increase the price Newco will pay for Metalbox Packaging to £835 million in cash payable direct to the MB Group shareholders. This contrasts with the Carnaud offer of shares in Carnaud and cash, with a theoretical value which has fluctuated from £815 million to £840 million over the last two weeks.

The Newco proposal is conditional on Newco receiving information previously given to Carnaud and requested by Newco, and may be increased further if such information confirms certain assumptions made by Newco in valuing Metalbox Packaging.

Newco's shareholders include the Ball Corporation, Mr Richard Hofmann, Mr Dan Gresham, and Elders Investments Limited.

Setting the Record Straight

In its attempt to force through its ill-conceived and defensive scheme, the MB Group board and its financial advisers have resorted to misleading and inaccurate statements about the Newco proposal. Some of these blatantly misrepresent the facts. MB Group shareholders risk losing a superior proposal due to the attitude of the MB Group board.

MYTH: Metalbox Packaging is not for sale.

FACT: Under the Carnaud scheme, Metalbox Packaging is being sold to Carnaud, which will change its name to CMB Packaging. CMB will be controlled by the present Carnaud management and based in Brussels.
Newco will be a UK based and managed company.

MYTH: Newco's offer undervalues Metalbox Packaging.

FACT: Newco's offer of £835 million in cash compares with the MB Group board's sale valuation of £780 million at the time the Carnaud scheme was announced.
The Newco offer is for cash, not paper. Its value is certain and, including the value of the non-packaging businesses, represents a price of some £3.20 per existing MB Group share.

MYTH: MB Group claims that Newco is using spoiling tactics.

FACT: It is MB Group directors who are using spoiling tactics in an attempt to deprive shareholders of an opportunity to consider a superior offer.
The Newco proposal is firm and serious and the details should be evaluated by the MB Group board on behalf of shareholders.

MYTH: Metalbox Packaging will be starved of financial resources for research and investment.

FACT: Newco plans to spend a minimum of £230 million on research and capital investment in the Metalbox Packaging UK businesses over the next five years.
Ball Corporation and Newco's management are committed to the expansion of Metalbox Packaging and its re-establishment as a technological leader.

MYTH: There is no industrial logic to Newco's proposal.

FACT: Ball Corporation is a recognised world leader in beverage can technology, the highest growth area of metal packaging. It has supplied packaging to the Food Industry for over 100 years and has extensive experience of the packaging industry worldwide.
In contrast, there is no logic in a diversified new MB Group holding a minority investment in a French controlled packaging company.

MYTH: Newco's management does not compare with the proven growth achievements of the MB Group.

FACT: Messrs Hofmann and Gresham have over 38 years of packaging industry experience between them. Messrs Smith and Stuart jointly have had only 10 years experience between them at MB Group.
During the period 1981-1987, whilst Mr Hofmann led Continental Can's metal container and packaging businesses, operating profits almost doubled. Over the period that Dr Smith has been Chairman of MB Group, profit before interest and tax of the packaging businesses actually declined.
Furthermore, Mr Hofmann was President of Continental Can when it succeeded in taking significant market share from Metalbox Packaging in the UK beverage can market.

MYTH: MB Group and its shareholders will have to pay significant capital gains tax.

FACT: Newco's scheme will result in no capital gains tax being payable by MB Group. The tax effects are no different to those of the Carnaud scheme.
MB Group shareholders will be offered the opportunity to take loan notes or additional shares in new MB Group, thus deferring any capital gains tax.

**YOU ARE BEING DEPRIVED OF THE OPPORTUNITY TO CONSIDER A BETTER DEAL.
VOTE AGAINST THE RESOLUTIONS TO COMPEL YOUR BOARD
TO NEGOTIATE THE HIGHEST OFFER ON YOUR BEHALF.**

Yours faithfully,

Chairman

The contents of this advertisement have been approved by Morgan Grenfell & Co. Limited for the purposes of Section 57 of the Financial Services Act 1986. Morgan Grenfell & Co. Limited is a member of The Securities Association.

INTERNATIONAL CAPITAL MARKETS

Foreign banks' Australian poser

Chris Sherwell on the wider implications of recent NatWest cuts

The recent decision by the Australian arm of Britain's National Westminster Bank to close eight offices and make a fifth of its employees redundant has graphically underlined the competitive problems facing foreign banks in Australia.

The bank, one of 16 chosen by the Government to receive full banking licences in 1985, has suffered losses of A$50m (US$41m) on its operations since setting up in early 1986, and is due to report its 1988 results shortly.

The painful and expensive consequences of its difficulties were announced by Mr Ron Goddard, chief executive: redundancies for 170 employees, and closure of all but five offices of National Westminster Finance Australia, the group's finance company.

Yet the harsh truth is that very few of the 16 have enjoyed real success as full trading banks in Australia. Only Citibank, Royal Bank of Canada (with the National Mntual insurance group) and Chase Manhattan (with the AMP insurance group) have set up significant retail networks.

Citibank is acknowledged by most of its peers to have gone furthest, but throngh the mechanism of agency arrangements rather than the costly process of settin up its branch network. Its best-known niche is in home-lending.

National Mutual Royal, notably through two building society acquisitions, has built up a sizeable branch network, as, to a lesser extent, has Chase AMP. Both are reckoned to be finding the going tough.

Other banks, such as Standard Chartered, have made even less headway, while Bank America called off a plan to open outlets within the stores of the Coles Myer retail chain.

But a lack of branches is really only a symptom of the foreign banks' problems. The causes go deeper, and include the cold fact that Australia is a high-cost country for a relatively labour-intensive service industry like retail banking.

For a start, none of the new banks expected the Labor Government to choose as many as 16 new foreign entrants. Some bankers believe that the Government hoodwinked them with its seductive noises and its hints that the number might be as few as six.

The battle for market share was then sharpened further by stronger-than-expected competition from the local Big Four trading banks, all of which responded quickly and impressively to the outside threat and are now reckoned to have neutralised it.

Deregulation of the financial sector meanwhile broke down the barriers which used to distinguish building societies, finance companies and other institutions from each other and from trading banks and merchant banks. Competition within the retail and wholesale sectors suddenly opened up.

Latterly, these difficulties have been compounded by the strength of the Australian dollar, which has added to foreign banks' costs, and by new rules of capital adequacy, which are boosting their cost of funding.

The end result is that some of the new foreign banks have actually been a disappointment, both to local bankers and to the Government. J.P. Morgan of the US has not even taken up its licence. The Japanese banks have made little attempt to expand beyond their existing client base.

Among those already operating as merchant banks, business has continued in much the way as it did before. In the case of Bankers Trust Australia, it recognised where its particular advantages lay – fund management, for example – and exploited them. Other merchant banks which have tried to do more have ended np either curtailing their ambitions or, like Chemical Bank, simply closing shop.

National Westminster's particular problem was that it inherited a raft of bad debts on the part of its finance company, which had expanded its loan portfolio aggressively before 1986. The bank spent the next two years paying for its mistake.

Last Friday's 170 redundancies, which will come from the group's head office as well as the finance company, will still leave the group with some 700 employees. The eight offices being closed are in relatively small centres, but they include Darwin and Canberra. The five staying open are in the state capitals of Adelaide, Brisbane, Melbourne, Perth and Sydney.

According to Mr Goddard, NatWest's commitment to Australia remains as strong as ever. But there is no doubt that its move is a stark pointer to the state of the industry. Australia is over-banked. Rationalisation is under way.

Canberra insider trading probe

By Chris Sherwell in Sydney

AN Australian parliamentary committee is to press ahead with an inquiry into insider trading in the share market, a move likely to increase pressure for stricter enforcement of existing legislation.

The committee hopes to report on the extent of insider trading, the adequacy of present laws and the policing role of the National Companies and Securities Commission (NCSC), the share market watchdog.

No successful prosecution has ever been brought in the Australian courts under the current legislation. But studies by two Canberra academics have concluded that the insider trading practice has existed for many years.

The NCSC published a Green Paper back in 1986 proposing tighter definitions of insider trading and stronger penalties. But market reaction was clear: test the existing legislation to see if it works.

Although the NCSC's lack of resources was a major factor preventing this, it initiated a number of investigations either directly or through its related state-level Corporate Affairs Commissions.

Three relatively small cases have so far come to court, involving some Canberra academics and two brokers. But the NCSC has often indicated it has bigger fish to fry.

While it acknowledges it may have raised public expectations about prosecutions, it also continues to state it has some important cases in hand, with one involving a "prominent businessman."

Given popular suspicions about insider trading, there is wide expectation that the parliamentary committee will recommend tougher legislation.

NAB warns on outdated settlement

By Chris Sherwell

FOREIGN INVESTORS will be driven away from the Australian stock market unless its antiquated settlement and clearing systems are revamped, the country's securities industry was told recently.

The warning came from the National Australia Bank (NAB) at a conference in New York on global custody services in the Asia-Pacific region, and was released simultaneously in Melbourne.

Mr John Gall, the bank's general manager for investment services, said the Australian stock markets were alone among the world's 15 largest in not providing a fixed settlement date.

"International investors are losing patience with the inability of the Australian securities industry to make meaningful changes," he said. "If we don't move to streamline our settlement and clearing systems, Australian markets risk losing much overseas portfolio investment."

The bank said Australia was criticised last year at an international symposium of securities administrators in Switzerland for its lack of a fixed settlement date and delays in the issue of share certificates.

According to Mr Gall, Australia needed a depository. Its insistence on the physical delivery of shares was at best inefficient, and periodically threatened to "drown the system in paper."

Even the planned new system of "flexible accelerated settlement and transfer," or FAST, would require the physical transfer of documents, and was only due to start trials with 25 companies in mid-1989.

Mr Gall said it failed to address the real problem of no fixed date settlement. Without that, it would do little to overcome Australia's poor standing in the international securities industry.

The stock exchange itself acknowledged back in 1987 that its greatest single problem was its out-of-date delivery and settlement system. Exchange officials have admitted that FAST is not the answer to its problems, and has confirmed there was still no agreement to go ahead with the "settlement transfer and registration," or STAR, system which was abandoned in the wake of the October 1987 share market crash.

Outside parties are now believed to be contemplating ways to set up a separate system.

DnC's London unit improves

By David Lascelles, Banking Editor

DEN norske Creditbank plc, the London subsidiary of the troubled Norwegian bank, made a pre-tax profit of £10.2m ($18.1m) last year. It had a £10.5m loss the year before.

Mr Brian Hudson, the chief executive who took over on January 1, said the improvement came from good results in commercial lending and dealing. The bank has now closed down the investment banking operations which brought on part of the previous year's losses.

DnC specialises in shipping, property, aircraft, hotel and finance company lending. It operates autonomously and has relatively little direct Norwegian business.

Mr Hudson said the bank was now strongly capitalised with a risk asset ratio of 16 per cent. Total capital funds are £138m, and total assets £1.2bn.

FT INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market. Closing prices on February 21

US DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Abbey National 7⅛ 92	200	*†95	93½	0	0	10.23
B.F.C.E. 7 92	150	†92	92⅛	+0⅛	+0⅛	10.01
B.F.C.E. 9¼ 95	150	97⅛	97¾	0	−0⅛	9.76
Brit. Tel. Fin. 9⅛ 98	250	97⅜	98	0	−0⅛	9.75
[illegible]	1000	97⅛	97⅛	+0⅛	+0⅛	9.50
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Belgium 5⅛ 92	55	101⅛	101⅞	−0	+0⅛	4.86
Belgium 4⅛ 94	45	98⅛	98⅞	0	+0⅛	5.01
Canada 4⅞ 92	80	98½	98¾	−0⅛	+0⅛	4.82
Elec. De France 5⅛ 94	20	100½	101	0	+0⅛	4.95
Ireland 5⅛ 93	30	100¼	100¾	0	+0¼	4.98
[illegible]	50	100⅞	100⅞	0	+0⅛	4.98
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	4.79
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	4.92
World Bank 5⅛ 92	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	4.75

Average price change... On day 0 on week +0⅛

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0½	11.02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1⅞	11.65
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	7.03
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0½	7.02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1⅛	15.54
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	8.69
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	17.42
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	15.72
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	11.27
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	10.96
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	7.11
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	14.17
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	6.92
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	6.75
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.48
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	14.58
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	15.46
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	16.21
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	7.35
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	10.79
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅞	8.73
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.18
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	11.10
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	16.08
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.07
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0½	8.48
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.28
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	8.69
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	11.49
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	11.06
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0½	11.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.35
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.58
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅝	7.19
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1⅛	11.31
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1	8.62
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	6.95
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	10.29
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.07
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅛	11.36
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−0⅞	11.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	−1⅛	8.85
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	14.54
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	11.06
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅛	7.88
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+0⅞	6.71
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	15.58

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
[illegible]	[illegible]	[illegible]	[illegible]	18/04	13.21	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	21/02	9	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	10/04	13	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	22/02	8.94	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	20/02	9.62	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	20/04	8.44	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	22/02	5.63	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	6/05	13.07	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	24/02	11.87	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	13/04	13.37	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	7/05	13.1	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	30/12	12.86	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	20/02	12.16	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	11/08	9.94	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	13/04	13.37	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	21/02	12.37	[illegible]

Average price change... On day 0.00 on week +0.06

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
[illegible]	[illegible]	[illegible]	[illegible]	113⅛	+0⅝	10.84
[illegible]	[illegible]	[illegible]	[illegible]	137⅞	−0⅛	3.67
[illegible]	[illegible]	[illegible]	[illegible]	149	−4½	4.94
[illegible]	[illegible]	[illegible]	[illegible]	140⅞	0	6.49
[illegible]	[illegible]	[illegible]	[illegible]	94½	+0⅛	11.74
[illegible]	[illegible]	[illegible]	[illegible]	67⅛	−0⅛	84.30
[illegible]	[illegible]	[illegible]	[illegible]	109⅞	+0⅛	2.42
[illegible]	[illegible]	[illegible]	[illegible]	132⅞	−2⅞	−1.08
[illegible]	[illegible]	[illegible]	[illegible]	97⅞	+0⅛	13.26
[illegible]	[illegible]	[illegible]	[illegible]	87⅞	+0⅛	23.75
[illegible]	[illegible]	[illegible]	[illegible]	106⅞	−0⅞	13.32
[illegible]	[illegible]	[illegible]	[illegible]	136½	−2¼	2.21
[illegible]	[illegible]	[illegible]	[illegible]	148	−2⅛	2.59
[illegible]	[illegible]	[illegible]	[illegible]	132	−2⅝	11.17
[illegible]	[illegible]	[illegible]	[illegible]	204⅛	+0⅛	−2.04
[illegible]	[illegible]	[illegible]	[illegible]	134⅞	+0⅞	4.68
[illegible]	[illegible]	[illegible]	[illegible]	102⅞	+0⅞	7.34
[illegible]	[illegible]	[illegible]	[illegible]	105	+1	13.23
[illegible]	[illegible]	[illegible]	[illegible]	93⅛	−0⅝	2.95
[illegible]	[illegible]	[illegible]	[illegible]	7⅞	0	47.22
[illegible]	[illegible]	[illegible]	[illegible]	85⅛	+0⅞	30.40

* No information available—previous day's price

† Only one market maker supplied a price

Straight Bonds: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

Floating Rate Notes: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡three-month; §above mean rate) for US dollars. C.cpn=The current coupon.

Convertible Bonds: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date of conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

INTERNATIONAL CAPITAL MARKETS

EIB issue revives interest in the D-Mark sector

By Andrew Freeman

THE EUROBOND markets saw new issue activity across a range of sectors yesterday, with a revival of business in the Euro-Dm area and renewed interest in long-dated sterling issues.

The European Investment Bank (EIB) caused some surprise when it tapped the D-Mark sector which has been depressed and nervous lately due to uncertainty over short-term rates.

EIB came with a DM300m 10-year deal carrying a coupon of 6½ per cent and priced at par by the lead manager, Trinkhaus und Burkhardt.

Traders said the issue looked well-priced and hoped that it would stimulate wider interest in the sector. Soon after launch, the bonds were trading well inside fees at less 1¼ bid.

Dealers reported some switching out of older EIB issues into the new paper, but activity was frustrated by a broad drop in prices in Germany yesterday, with supranational borrowers' issues falling by around 15 basis points and lesser-rated paper down by around ½ point.

The fall in prices was exacerbated by news that West German producer prices, a key inflation gauge, rose a full percentage point in January.

The EIB price later slipped to less 1.65 bid, still comfortably within fees. The issue proceeds were part-swapped.

EIB also borrowed in the European currency unit yesterday, launching an Ecu100m issue via San Paolo Bank. The seven-year bonds carry a coupon of 8¾ per cent and were priced at 101¼.

Traders said the pricing was right and that the issue looked steady in a dull sector.

INTERNATIONAL BONDS

Hammerson, the UK property and development company which was recently the subject of a takeover bid, launched a £100m issue maturing in December 2013.

The bonds carry a coupon of 10¾ per cent, and were priced by the lead manager, Kleinwort Benson, at 99.888 per cent to yield 175 basis points over the 9 per cent 2008 UK government bond.

The issue was aimed at interest at the long end of the Eurosterling yield curve, which several other UK corporate borrowers are currently considering.

Dealers said the deal was reasonably priced, but suffered from unfortunate timing – the gilt market continued to look weak yesterday, with many issues marked down by around ¾ point.

Three deals were launched in the Australian dollar sector, two of which were one-year issues bearing 20 per cent coupons and carrying a redemption feature allowing the borrower to pay back the principal in either Australian or US dollars.

Bankers Trust was the lead manager of an A$50m deal for Postipankki, the Finnish postal bank, and quickly sold all the paper, primarily to retail accounts in Europe.

The bonds were quoted by the lead manager at less 1 bid, on full fees. The issue proceeds were swapped into floating-rate US dollars.

Kredietbank International Finance tapped the market for A$60m. The lead manager was Credit Suisse First Boston.

One broker was quoting a price of less 1.10 bid, outside fees, meaning co-managers are taking a loss on their allocations of bonds.

Hambros Bank was the lead manager of an A$50m two-year issue for Svenska Handelsbanken which carried a 16½ per cent coupon and was priced at 101¾ per cent.

Initial sales were said to be satisfactory, with retail interest expected to follow through over the next few days.

NEW INTERNATIONAL BOND ISSUES

Borrower	Amount m.	Coupon %	Price	Maturity	Fees	Book runner
D-MARKS						
European Investment Bank◆	300	6½	100	1999	1¾/1⅛	Trinkaus & Burkhardt
Eurofima★★◆	125	6¾	100	1992	n/a	BHF-Bank
Mitsubishi Nederland★★◆	80	6⅝	101½	1998	1⅞/1¼	Bk of Tokyo(Deutschland)
Primary Ind.Bk Australia★★◆	75	6⅞	101⅞	1992	1⅜/1	Commerzbank
ECUs						
European Investment Bank◆	100	8⅞	101⅛	1996	1⅞/1¼	San Paolo Bank
STERLING						
Hammerson Property◆	100	10¾	99.888	2013	2½/1½	Kleinwort Benson
FRENCH FRANCS						
Rhone Poulenc Comm.Fin.◆	500	8¾	100⅞	1994	1¼/1¼	Credit Agricole
AUSTRALIAN DOLLARS						
Kredietbank Int.Fin.◆	60	20	101⅛	1990	1/⅛	CSFB
Svenska Handelsbanken◆	50	16½	101¾	1991	1¼/1	Hambros Bank
Postipankki◆	50	20	101⅛	1990	1/⅛	Bankers Trust Int.
Index increased:						
Merrill Lynch(a)◆	75	16½	101⅞	1991	1¼/1	Merrill Lynch
YEN						
Marubeni Int. Finance◆	30bn	5	101½	1993	1⅞/1⅛	Yamaichi Int. (Europe)
New S.Wales Treas.Crp.(b)◆	30bn	[illegible]	101.35	1994	n/a	Nomura Secs.
SWISS FRANCS						
Nikkatsu Corp.★★◆	40	[illegible]	[illegible]	[illegible]	n/a	SBC

★★Private placement. ◆Final terms. a) Issue increased from A$50m. b) First entity under shelf-registration system, to issue Samurai bond, since system introduced last October.

Japanese banks plan new profit accounting

JAPANESE banks will introduce new profit accounting standards starting in the six months ending September this year, the Federation of Bankers' Associations of Japan said yesterday, Reuter reports.

Mr Kazuo Ibuki, the federation chairman, said the rules would eliminate operating profit and instead divide current profit into four new categories. The changes are aimed at giving more detailed disclosures of results, he said.

The new divisions of current profit will be: profits from investments such as loans, bond coupons and stock dividends; commissions from customers; profits from foreign exchange and bond trading; and profits from stock trading and the Tokkin money trusts.

Tokkin have been used to artificially boosting operating profits - the key measure of Japanese bank performance - but since operating profits will no longer be posted, some of the rationale for investing in Tokkin will presumably disappear.

Industry analysts yesterday welcomed the move, saying it would make bank results more realistic and easier to analyse.

They added that the banks will have time to adjust. Many had expected that the new rules would have to be applied to the current fiscal year, ending March 1989.

Finance house seeks £155m

By Norma Cohen

INTERMEDIATE Capital Group, an independent arranger and provider of intermediate or mezzanine finance, is seeking a £155m five-year extendible credit facility which will provide the bulk of its working capital.

National Westminster Bank is arranger and agent. The remaining £45m in capital for the fund is in equity provided by a group of 10 banks.

The loan is extendible for one year at the end of the first and second years. Interest is payable at 1⅛ over London interbank offered rates.

Greenspan speech hits Treasuries

By Janet Bush in New York and Katharine Campbell in London

US TREASURY bonds dipped by around ¼ point yesterday morning in quiet trading as dealers paid close attention to the Humphrey-Hawkins testimony of Mr Alan Greenspan, US Federal Reserve chairman.

At midsession, prices were quoted as much as ⅜ point lower. The Treasury's benchmark long bond stood ⅜ point down for a yield of 9.07 per cent.

Mr Greenspan had been expected to reiterate the need to continue to err on the side of tightness and on his concern about inflation, if only to justify the monetary tightening last week.

He said that the Fed's central tendency forecast was for inflation to rise slightly this year. "But let me stress that the current rate of inflation, let alone an increase, is not acceptable, and our policies are designed to reduce inflation in coming years."

The bond market's small decline during the testimony reflected general concern about higher inflation with Mr Greenspan describing the economy as still rather robust. Many bond analysts are looking for a Fed Funds target of 9½ per cent by the end of this month compared with around 9⅛ per cent now.

Price declines also appeared to reflect a slight weakening of the dollar which was reacting not to Mr Greenspan's inflation rhetoric but the lack of concrete action to combat price pressures.

The currency markets have been waiting for a rise in the discount rate but there was no hint in Mr Greenspan's testimony yesterday that they are going to get one.

The Fed chairman said that monetary policy, at least for the moment, appeared to be on track.

The bond market was also cautious yesterday prior to the release today of consumer prices data for January particularly given the jump in producer prices last month. The consensus of forecasts is for a rise of around 0.6 per cent.

UNEXPECTED currency weakness proved to be the main factor pulling UK gilt-edged securities down up to half a point yesterday.

GOVERNMENT BONDS

Mr Greenspan's testimony, while not as tough as some had anticipated, was interpreted as signalling the strong possibility of higher interest rates around the world. With the perception that base rates in the UK have peaked at 13 per cent, this was seen as bearish for sterling, which fell almost 3 pfennigs against the D-Mark. Dealers added that there had been one very large sell order which had helped nudge prices down.

Prices were lower accross maturities, and the benchmark Treasury 2003-2007 closed half a point weaker at 117 ⁵⁄₁₆.

MOST European markets were lower, reflecting nervousness at the tone of Mr Greenspan's statements, and the ensuing fall in US Treasuries.

The Dutch state loan prices fell 20 basis points in what dealers characterised as a difficult market. The latest 10-year issoe, which bears a 6¾ per cent conpon, was 20 basis points lower at 98.10, yielding 7.02 per cent.

The Dutch market has taken a battering recently. The spread over German bunds widened briefly to 25 basis points at one point last week, when investors would have found it attractive to sell the German market and buy Dutch paper. The spread is now around 16 basis points. In mid 1988 the relationship was the other way round, with bunds yielding 10 basis points more than Dutch bonds.

A recent paper by Banque Paribas attributes the changing spread relationship to a number of factors. Much has been made of the fact that the mooted imposition of a European Community wide withholding tax would impact Dutch paper more than German bunds, where such a levy already exists.

Paribas cites additional reasons for the Dutch underperformance. The principal one is that foreign investors are a greater force in Holland, particularly since the advent of the German withholding tax at the beginning of the year.

According to the paper over 40 per cent of new Dutch state loans went to non-residents in 1988. The relatively high foreign preseoce makes Dutch state issues more vulnerable in a declining market, the paper argues.

THE GERMAN market was particularly weak in early morning trading, some 30 pfennigs lower than the previous evening.

BENCHMARK GOVERNMENT BONDS

		Coupon	Red Date	Price	Change	Yield	Week ago	Month ago
UK GILTS		13.500	8/92	108-21	-5/32	10.54	10.41	10.38
		9.750	1/98	99-08	-11/32	9.88	9.78	9.90
		9.000	10/08	100-08	-17/32	8.97	8.94	9.07
US TREASURY *		8.875	11/98	97-23	-1/32	9.23	9.22	9.00
		9.000	11/18	99-00	-8/32	9.10	9.08	8.87
JAPAN	No 111	4.800	6/98	98.3311	+0.126	4.96	4.94	4.87
	No 2	5.700	3/07	108.6071	+0.209	4.81	4.83	4.80
GERMANY		6.375	11/98	96.4500	-0.225	6.91	6.84	6.68
FRANCE	BTAN	8.000	1/94	94.6861	-0.017	9.39	9.13	8.56
	OAT	8.125	5/99	93.5000	-0.060	9.11	8.95	8.47
CANADA *		10.250	12/98	99.3750	-0.375	10.35	10.22	10.04
NETHERLANDS		6.7500	10/98	98.0250	-0.250	7.12	7.09	6.75
AUSTRALIA		12.000	7/99	89.8152	+0.151	13.90	13.90	13.02

London closing, *denotes New York morning session
Yields: Local market standard. Prices: US, UK in 32nds., others in decimal

Technical Data/ATLAS Price Sources

MoF rejects Chukoku fund proposals

THE JAPANESE Ministry of Finance has rejected three of the four proposals put forward by the securities industry for reforming the rules governing the Chukoku investment fund, reports Reuter.

The MoF will not allow 13 investment trust management firms to decrease minimum investor deposits in the Chukoku to one yen from the current Y10,000, as they had requested. It also will not let depositors withdraw funds without notice.

The ministry also rejected a proposal that it raise the limit on investments by the Chukoku fund in money market instruments from the current 30 per cent.

However, it will allow a decrease in minimum Chukoku fund investment in medium-term Japanese government bonds to 30 per cent from 50 per cent, as securities firms had asked. This change will take effect from March 1.

The ministry described this as an ad hoc measure in response to the decline in government bond middle-term issues. It will be reconsidered if the issues increase again.

Chukoku funds were introduced in 1980 in imitation of US money market funds. At the end of 1988 Chukoku fund investments amounted to Y10,950bn.

The banking industry had strongly resisted the extensive deregulation of Chukoku funds proposed by the Japanese securities industry. It feared the proposed reforms would give the securities industry the right to settle transactions.

● The Tokyo Stock Exchange plans to stiffen its rules in an effort to bring pre-registration share prices closer to opening listed prices. Mr Minoru Nagaoka, the chairman, announced the moves against the background of the Recruit scandal in which shares of Recruit Cosmos had soared after being listed on the over-the-counter market.

Under the new rule, 25 per cent to 50 per cent of the shares to be offered to the public on the TSE will have to be auctioned by pre-registration investors.

LONDON MARKET STATISTICS

FT-ACTUARIES SHARE INDICES

These Indices are the joint compilation of the Financial Times, the Institute of Actuaries and the Faculty of Actuaries

EQUITY GROUPS & SUB-SECTIONS — Tuesday February 21 1989

FIXED INTEREST

RISES AND FALLS YESTERDAY

	Rises	Falls	Same
British Funds	8	93	8
Corporations, Dominion and Foreign Bonds	2	13	29
Industrials	487	334	764
Financial and Properties	152	130	387
Oils	22	24	54
Plantations	0	2	10
Mines	69	20	96
Others	62	25	162
Totals	802	641	1,510

LONDON RECENT ISSUES

EQUITIES

FIXED INTEREST STOCKS

RIGHTS OFFERS

TRADITIONAL OPTIONS

● First Dealings Feb 20
● Last Dealings Mar 3
● Last Declarations Jun 1
● For settlement Jun 12

For rate indications see end of London Share Service

Calls in Dares Est, Ted Housing, Vistec, Bestwood, Rutland, Stormgard, Jaguar, Ferranti, Monument Oil & Gas, Cons Gold, Racal Telecom, Glams, B. Priest, Markey, Control Sec Natwest 8s, Lloyds 8s, Morgan Grenfell, Charterhall. Put: Racal Telecom.

LONDON TRADED OPTIONS

DIXONS, the retail concern with strong electricals interest, as well as cameras, headed Plessey and a clutch of electronics stocks into the limelight on the traded options market yesterday, attracting 3,370 contracts. Of the Dixons options trading, there was not a widely different split between the call and put amounts, the one coming to 1,850 contracts and the other to 1,520.

Other companies in the broad electronics field figuring strongly in options trading included Plessey, the subject of a bid from GEC of the UK and Siemens of West Germany, in which 3,278 contracts were handled, worth 1,000 shares a time. Calls in the stock came to 2,246 contracts, including 792 in the February 220s, and puts to 1,030, including 1,000 in the February 240s.

A major talking point among market dealers lay on the day, however, in the question of the span of time given to the closing rotation in the FT-SE 100 index contracts. This normally lasts ten minutes, but delays were reported, disturbing exercise decisions, and causing some market floor controversy. There was concern in places about the positions of holders of short positions in the February options lying at exercise prices below the going index level. A dip in the FT-SE 100 index itself at the time of the rotation was apparently the bugbear. Overall index turnover came to 5,642 calls and 927 puts.

GEC took a major share of the minor placings in the day's turnover league, attracting 2,626 contracts, comprised of 2,614 calls and only 12 puts. The April 240 calls in the option on the stock ended on their own as the heaviest trading reported, with the April 240 calls attracting some attention.

Racal continued to capture a lot of attention, but Cadbury's — as though to draw attention away from the electronics stocks — found business of 1,815 contracts, consisting in 1,225 calls and 590 puts, with an even spread of business around the various series seen.

UK COMPANY NEWS - THE RECKONING AT NATIONAL WESTMINSTER

Lending volumes up sharply but competition beginning to affect growth

Profits ahead of expectations at £1.4bn

By David Lascelles, Banking Editor

NATIONAL Westminster Bank, the UK's largest clearing bank, exactly doubled its profits last year to £1.407bn, although the comparison with 1987 was distorted by heavy provisions against Third World loans that year.

Lord Boardman, the chairman, said the increase, after adjusting for the special provisions, was of the order of 15 per cent, which he described as "an impressive performance in particularly challenging market conditions."

Retained profit was £720m, up from £261m. The bank is increasing its dividend by 18 per cent to a total of 28.25p, the final payment being 19p. Earnings advanced to 123p (57p).

The improved profits, which were at the higher end of the City's expectations and gave a fillip to the stock market, came from most of NatWest's operating divisions, with the notable exception of County NatWest, its troubled investment banking subsidiary. That lost £56m because of depressed equity and capital markets around the world.

The major contributor to profits was domestic banking with £1.005bn, an operating increase of 9 per cent. NatWest continued to attract new customers, and lending volumes grew sharply, with sterling advances up 22 per cent. But there are signs that increased competition is beginning to have its affect on business growth: margins are narrowing, and lending is slowing down, particularly on the personal side.

International banking earned £280m, against a £339m loss the previous year caused mainly by Third World provisions. This included a contribution of £106m from NatWest's growing US subsidiaries. Provisions against problem country loans were £49m, down from £562m. The cover rose slightly to 35 per cent.

Related banking services earned £178m, a rise of 12.5 per cent. The main factors in this rise were Lombard North Central, the asset-based finance company which made £120m (up from £103m), and NatWest Insurance Services with £35m (£25m). NatWest Home Loans, the mortgage subsidiary, suffered a small fall in profits from £79m to £78m because of the effects of higher interest rates on the housing market. Mortgages outstanding rose by £1bn to £6.6bn.

NatWest's total assets grew by 13 per cent during the year to £98.6bn. The group also revalued its properties and added £565m to the revaluation reserves. There is to be a one-for-one scrip issue amounting to £778m, which will be capitalised to the tune of £600m from the property revaluation reserve, and the remainder from the share premium account.

Analysts said yesterday that NatWest's move is likely to cause controversy among other clearing banks because of lack of certainty over whether such tactics were permissible. However Mr Burns said the capitalisation of the revaluation had been approved by the Bank of England.

Mr John Burns, the chief financial officer, said that this action, which should have no effect on the share price, would enable NatWest to boost its equity capital. NatWest estimates that its risk asset ratio under the new Basle rules is 9.8 per cent, ahead of the internationally agreed minimum of 8 per cent.

Lord Boardman stressed that NatWest does not expect to make any strategic moves that cannot be financed by its own resources or debt issues. "We have no plans for a rights issue," he said.

Mr Tom Frost, the group chief executive, said that NatWest was strongly placed in its chosen domestic and overseas markets, and was poised for further progress and increased profitability. Trading in the early weeks of 1989 has been satisfactory and the bank is confident about the prospects for the year as a whole.

Tom Frost, group chief executive (left) and Lord Boardman, chairman.

ANALYSIS OF GROUP PROFIT BEFORE TAX

	1988 £m	1987 £m
The Bank*	805	740
International Westminster Bank	147	(178)
Lombard North Central Group	120	103
National Westminster Bancorp	106	(95)
National Westminster Home Loans	78	79
NatWest Investment Bank Group	(56)	(116)
Ulster Bank Group	45	36
National Westminster Insurance Services	35	25
Others (net)	9	26
Associates – 3i Group	64	26
– Yorkshire Bank	40	36
– Others	11	19
Group profit before taxation	1,407	704

* Less dividends from associates of £19m (1987 £18m)

Speculation abounds over who will succeed the chairman

AS A HORSEMAN, Lord Boardman knows a thing or two about racing. And he seems to have been enjoying reading about all the people who have been tipped to succeed him as chairman of the UK's largest bank, writes David Lascelles.

The noble lord, better known to the world at large as former Tory MP Tom Boardman, is now 70 and should, by all accounts, step down at next April's annual meeting after a seven year stint. But the unanswered question remains as to who will take his place.

Pressed about his intentions yesterday, he chuckled and said: "I have been fascinated to see the list of eminent people who have been tipped to succeed me. The Chancellor of the Exchequer, the Governor of the Bank of England, the chairman of BP (Sir Peter Walters), and the chairman of the Takeover Panel (Lord Alexander)."

But Lord Boardman was giving nothing away. "At the right time the board will announce who will succeed me, and when," was all he would say.

He did, however, dismiss suggestions that NatWest's 31-member board might be a little unwieldy – which is believed to be the view of Sir Peter Walters, the deputy chairman, who made his own acceptance of the chairmanship conditional on cutting it back.

Quite how important the succession is to NatWest is, itself, a debatable question. The NatWest chairmanship is very much a figurehead position – more so than at the other clearers – and the executive ranks are strong and cohesive enough to provide the necessary leadership.

On the other hand, NatWest is going through a rough patch with its troubles at County, and it needs to prevent the succession becoming a problem of its own making.

Acquisition costs and fraud hit Handelsbank

NATWEST's SWISS subsidiary, Handelsbank, reported only a nominal profit last year of SFr 2m (£700,000), writes David Lascelles.

This was after absorbing the cost of an acquisition and a fraud by a director of its asset management business. As a result the Zurich-based bank will pay no dividend.

Handelsbank said it was making a total charge of SFr 50m, which would be partly covered by a transfer of SFr 41m from inner reserves.

County problems still serious despite marked improvement

COUNTY NATWEST was the nasty blot of NatWest's copy-book yesterday, writes David Lascelles.

The bank revealed that its troubled investment banking arm had lost £56m. Although this was a considerable improvement on County's £116m loss the year before, and was at the lower end of analysts' expectations, it underlined just how serious County's problems remain. It has now cost NatWest £250m since it was formed three years ago, making it the most expensive investment banking venture in the City.

However Lord Boardman, the group chairman, stressed: "We remain committed to a successful and profitable investment banking business. We have fully reviewed the scale of our activity and the pace of development." He also said that NatWest had strengthened County's management with the appointment last month of a new chief executive, Mr Howard Macdonald.

Mr Terry Green, the group deputy chief executive, who was running County on a temporary basis for most of last year, said that the bulk of the losses - £39m - had come from County's overseas operations. The net loss in the UK was £6m, and there were £11m of "exceptional losses".

As far as the UK was concerned, County's corporate advisory and venture capital business performed well, earning a profit of £45m. But capital market activities lost £20m, including £15m on gilt-edged dealing. The equities business, including London-based European equities, lost £27m, and there were other deficits of £4m.

Abroad, the losses took in £18m in New York (including £12m on treasury bond dealing, now discontinued) and £10m in Japan. There was a £11m write back of leasing provisions.

County also bore a loss of £18m on its 9.5 per cent holding in Blue Arrow, the employment services company whose unsuccessful £837m rights issue it underwrote in 1987. This consisted of a £10m write down in the value of the shares to 83p, and £8m in carrying costs.

County's handling of Blue Arrow is now the subject of an official inquiry by the Department of Trade for possible breach of disclosure rules, and Lord Boardman faced a barrage of probing questions yesterday. He reacted particularly sharply to a suggestion that NatWest had been "economical with the truth" in its earlier statements about Blue Arrow, saying that such a claim was "completely unjustified". He also rejected a question suggesting that some members of the board might have to resign if the result of the inquiry was unfavourable.

He said that NatWest was giving the inquiry all the help it could, and was hoping for a speedy conclusion. "In the meantime, the press has commented and speculated," he said. "Some of this has been wide of the mark, and it is most frustrating for my colleagues and me not to respond, but we are quite satisfied that it would not be right to do so at this stage."

Asked what lessons NatWest had learnt from its venture into investment banking, Lord Boardman said: "If there were lessons to be learnt, they have been learnt, and action will have been taken."

NatWest executives were wary of predicting how County's fortunes would turn out this year. Mr Macdonald, the new chief executive, said there had been a heartening upturn in market activity in the early weeks of this year, but he feared this might only encourage marginal players to hang on when capacity needed to be reduced.

Lord Boardman said Mr Macdonald could have "as long as he wants" to turn County round.

Other executives said it was possible that County might be operating profitably by the end of this year, but this was hard to forecast because so much depended on the fortunes of the securities markets.

Howard Macdonald: time on his side

Costs have risen 21% to £3.2bn

MR TOM FROST, NatWest's chief executive, yesterday identified the two key challenges facing his bank: competition and costs.

Of the two, the second is the one over which NatWest has the greater control. Yet the results showed costs rising at an accelerating rate, writes David Lascelles.

The total increase in costs was 21 per cent to £3.2bn, compared to a rise in underlying profits of 15 per cent. Personnel costs were up 21 per cent to £1.9bn, and the number of people employed by the group was 111,000, up from 102,000.

While much of this increase was due to acquisitions and capacity expansion to meet higher business volume, NatWest's ratio of total costs to income – the key efficiency measure – rose from 66 per cent to 67 per cent.

The rise was said by NatWest to be in line with the budget for the year. But the increase is likely to leave it with the fastest rising costs among the clearing banks.

According to estimates by analysts at Shearson Lehman Hutton, the increase in total costs is likely to be 12 per cent at Barclays and Lloyds, and 7 per cent at Midland when these banks report their results.

Mr Frost said he had introduced a pay incentive scheme for managers, linked in part to their ability to cut costs. He also expected staff numbers to level off as the bank's investment in computer technology began to pay dividends.

COMPANY NEWS IN BRIEF

ALBRIGHT & WILSON, maker of chemicals and allied products, announced trading profits of £43.2m for 1988, compared with a previous £46.6m. Sales rose from £650.2m to £555m. Its ultimate holding company is Tenneco of the US.

ALLIED RESTAURANTS has sold The Mariner, an entertainment complex in Poole, Dorset, to an undisclosed company for £3.13m in cash.

CLOSE BROTHERS, the merchant bank, is merging its share registration business with that of Federated Trust Corporation. The new operating company is to be called Stentiford Close Registrars.

ERF HOLDINGS rights issue of 1.92m new ordinary has been taken up in respect of 1.72m shares (89.32 per cent).

FORD SELLAR Morris Properties - option to acquire 74.1 per cent of capital of London & Overseas Land, owned by the Lovett family, has been extended to be exercisable between April 30 and May 7 this year. But it will lapse if FSM does not announce its intention to make an offer for the whole of LOL by February 27.

HAMPSON INDUSTRIES has acquired the PB Group, a Kent-based manufacturer and supplier of aluminium products for use in double glazing. The deal will be financed via the issue of £2m worth of cumulative convertible redeemable preference shares, of which £300,000 worth will be placed. The balance will be retained by P Bingham, the principal shareholder in PB.

HOGG ROBINSON & Gardner Mountain: Gardner Mountain & Capel-Cure Agencies, the wholly-owned Lloyds members' agency of HRGM, has acquired KC Webb (Underwriting) for about £135,000 cash. Further consideration of about £100,000 is dependent on future results.

LEIGH INTERESTS has acquired a waste disposal business at Cliffe, near Selby, from Mr Michael Simpson. It will be combined with J E Bartram to consolidate the company's position in the area. Mr Simpson will retain his helicopter spraying and property interests.

MTM, speciality chemicals manufacturer, announced details of £5.5m share issue to fund purchase of JD Campbell & Sons, agrochemical producer. It is issuing 3,283,588 shares at 167½p, of which 2.05m have been placed with institutions, 712,538 will be acquired by a company in which Mr Richard Lines, MTM chairman, has a beneficial controlling interest and 519,407 will be retained by the vendors.

RODIME will be making about 100 additional manufacturing and administrative employees in the US redundant during the second quarter of 1989. Manufacturing at Boca Raton, Florida, will accordingly cease and that plant used only for rental product assembly and disk drive engineering. Fifty employees at Boca Raton were made redundant on February 17.

VICTOR PRODUCTS – The offer for the preference shares has been accepted by holders of 610,683 preference (79.9 per cent). The conditions have been declared wholly unconditional and remain open.

YEARLINGS - The interest rate for this week's issue of local authority bonds is 12⅛ per cent, up ⅛ of a percentage point from last week, and compares with 9⅞ per cent a year ago. The bonds are issued at par and are redeemable on February 28 1990. A full list of issues will be published in tomorrow's edition.

UK COMPANY NEWS

Likely grounding for space retailer

David Waller on the colourful career of Local London in the light of yesterday's bid

ONLY LAST Friday, Marina Development Group declared that it had given up hope of finding a white knight in its bid battle with Local London. Yesterday, a saviour turned up in the obliging form of Priest Marians, an acquisition-minded property company which has made a bid for Local London.

Having won the backing of Brent Walker's 29.9 per cent holding, Marians easily managed to pick up another 20 per cent of its target yesterday. Unless Local London itself finds a white knight, its brief – and sometimes spectacular – stock market career would appear to be over.

Local London was a classic "bull market" stock. From the moment that it joined the Unlisted Securities Market in September 1986, until the crash just over a year later, its shares were exceedingly highly rated by investors. They had faith in the company's management, led by brothers Graham and Robert Bourne, in the business centre concept that Local London had pioneered and in the company's potential for above average growth.

As with many other go-go stocks of the pre-crash era, the process was self-fulfilling. The high rating meant that it was easy to push out shares to make earnings-enhancing acquisitions.

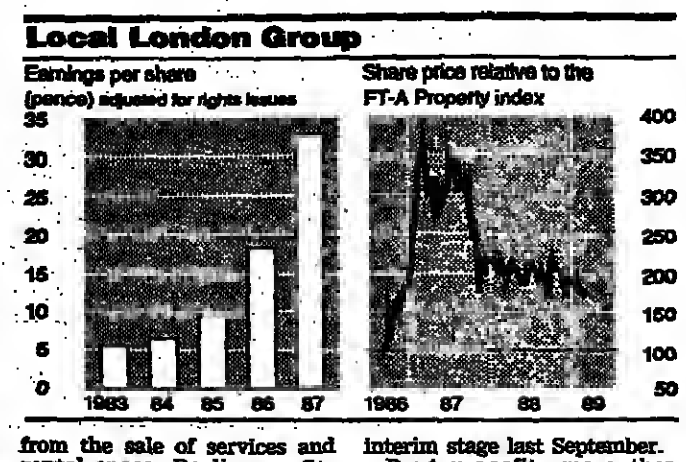
Local London grew from a market capitalisation of a mere £6.6m when it floated, doubling its size a few months later with the £40m acquisition of Standard Security, to a peak of £193m in the summer of 1987. The shares, floated at 135p, touched 965p at one point.

In those balmy days, Local London was perceived as a property company with a difference: in fact, it was thought of as less a property company than the first of a new breed of "space retailers". It specialised in buying awkward properties which no other developer would touch. It would then erect hardboard partitions, apply a coat of paint and rent out the newly-created offices to myriad small businesses.

It differed from other property companies in that it was prepared to take on long-term liabilities offset by only short-term sources of income. And the property portfolio was more intensively managed than most: Local London had many tenants on short leases, rather than just a few tenants on long leases.

The result was that Local could charge a rent, payable quarterly in advance, far higher than normal commercial rates, and significantly higher than its own liability on a site. On top of that there was licence income coming from the sale to "clients" of services such as photocopying, message-taking and security.

Local London thus had a claim to be rated, not on the asset value of its property portfolio, like other companies in the sector, but on the basis of the stream of earnings coming from the sale of services and rental space. Dealing profits were – and still are – a separate source of income altogether.



The crash dealt a severe blow to Local London, as it did to many companies which seemed to owe their growth prospects to the ability to push out vast quantities of paper. The shares underperformed the market as a whole by no less than 55 per cent in the three weeks following Black Monday.

Although they subsequently recovered a little, thay have made a dreadful investment since the crash, underperforming the property sector by 42 per cent.

In a bear market, investors were no longer willing to accept the argument that it should be valued on the basis of earnings. This was brought home to investors at the interim stage last September.

Pre-tax profits more than donbled to £5.52m and earnings were up 77 per cent. Nevertheless, such was the increase in overheads at the business centres that licence and rental income grew by only a fraction, from £2.03m to £2.18m.

The rest of the profit came from property-dealing. The increase was commendable, but Local London'a claim to a premium rating disappeared.

What stopped the shares from sinking back to a conventional discount to asset value, like any other property company, was Brent Walker's Mr George Walker, who pitched in the following week to buy 14.9 per cent of the company at 550p a share.

Priest Marians, a rather more conventional company than its target, is run by Mr Simon Fussell, a former design consultant. Before yesterday's bid, its most ambitious move was the £87m purchase early last year of the Langham estate of 170 freehold properties in London's West End. It recently held abortive bid talks with Inoco, another propsrty company.

If the hid is successful, Marians will be getting 25 business centres now operated by Local london, 10 self-access storage centres, portfolios of residential and commercial properties – and a 29.93 per cent stake in Marina Development Group.

Of particular interest to Mariane is the 3¼ acre former Osram site in Hammersmith, West London, wbicb Local London bought last September for £15m and had intended to turn into a business village.

What this is worth in terms of assets is not definitivaly known: at the end of the last financial year, stated assets worked out at 313p a share. There was a rumour yesterday that the assets were now worth as much as 800p share, which might account for tha 10p rise in the predator's share price to 439p, bnt analysts suggested that a more realistic value would be 385p-400p a share.

Priest Marians intends to sell off Local London'a non-core huainesses. Nevertheless, shareholders will be antitled to ask where gearing will be following the cash acquisition – and whether the company has the management resources to run a company such as Local London.

Stanley buys casinos from Brent Walker

By David Waller

Stanley Leisure, the betting shops, casinos and snooker club operator, has agreed to buy five of Brent Walker's provincial casinos for £25m.

The purchase, by far Stanley'e biggest deal since it came to the market in the summer of 1986, is to be financed via a vendor rigbts issne of 10m new Stanley shares.

Some 11.18m new shares will be issued to Brent Walker. All but 1.18m of these will be bought back by Hambros Bank and offered by way of rights to Stanley's sharebolders the basis of 58 shares for every 100 already beld.

The new shares, offered at 220p against a market price down 7p last night at 254p, will in total account for just under 40 per cent of Stanley's enlarged equity.

The casinos are located in Manchester, Salford, Birkenhead, Leicester and Lnton. Brent Walker has warranted that pre-tax profits for 1987 would be no less than £2.15m. The drop – the value of cash and cheques exchanged for gaming chips – was £47.6m and the gross gaming yield was £8.8m. Net assets at the year-end stood at £8.7m.

Mr Leonard Steinberg, chairman, said that the deal was a one-off chance to expand the casinos side of its business "where opportunities for significant expansion are strictly limited."

He said that on the basis of the three casinos already operated hy Stanley, in Manchester, Liverpooi and Newcastle, the Brent Walker operations could he run much more efficiently than at present.

From Brent Walker'a point of view, the disposal is the latest move in a de-gearing exercise following a move into the drinks business through the acquisitions of Ellerman Holdings and of Lonrho's European business in this sector. The deals left Brent Walker with borrowings of £900m and 150 per cent gearing.

Gold Fields to bring out interim results before end of week

By Kenneth Gooding, Mining Correspondent

Consolidated Gold Fields, the diversified mining group, is to speed np puhlication of its half-year results in the wake of the £3.2hn hostile hid by Minorco, the South African-controlled investment group.

Auditors were checking the figures yesterday and Gold Fields expects to give shareholders the details before the end of this week.

Analysts expect the results, for the half-year to December 31, to be good but not spectacular compared with those for the same months of 1987 whan Gold Fields achieved £182.7m before tax. That total included an extraordinary profit of £82m from the sale of shares in its associate, Gold Fields of South Africa.

Analysts' estimates yesterday of the most recent half-year ranga from £115m to £120m pre-tax or 43p earnings per share by Mr Philip Taylor of Warhurg Securities, to £137m pre-tax and eps of 50p by Ms Jane MacKelvie at Barclays de Zoete Wedd.

Mr Jeff Ware at County NatWest Securities suggested Gold Fields would show a taxable figure of £129m, up 28 per cent on the profits for the same period in 1987 after the GFSA sale was excluded.

He forecast a big increase in the profits of two of the husinesses Minorco plans to keep should it acquire Gold Fields. Profit from ARC's UK operations should jump from £36m to £46m while the wholly-owned North American mining subsidiary, Gold Fields Mining Corporation, can be expected to lift profit from £17m to £29m, suggested Mr Ware.

Gold Fields said yesterday the interim results would show that, up to the end of December, it had spent "substantially less than £20m" to defend itself against the previous Minorco bid – well below the figure of £50m sometimes quoted by Minorco.

Meanwhile, Minorco yesterday formally informed the New York court about its decision to hid again for Gold Fields. Its new offer is conditional on the US appeal court lifting an injunction whicb pravents Minorco increasing its shareholding in Gold Fields above the present 30 per cent.

There was still no indication when the court will give its judgment.

Gold Fields shares advanced 7p to £14.60 yesterday while Minorco added 3p to 769p

Nichols (Vimto) hits £6.6m and plans buy-back from B&C

By Lisa Wood

BRITISH & Commonwealth Holdings, the financial conglomerate, is to sell its 35.6 per cent stake in J.N. Nichols (Vimto). Of the total, Nichols, the soft drinks group, plans to buy back 14.9 per cent at a net cost of £6.5m. The rest will be placed out.

Manchester-based Nichols, which will buy back the shares at a price of 230p, yesterday announced pre-tax profits of £6.55m (£5.96m) for the year to December 31. Its shares were unchanged at 255p.

At £5.42m, operating profits showed a 17 per cent increase on the previous year's £4.63m. Investment income fell from £1.32m to £1.13m. Turnover advanced to £39.34m (£36.76m).

Earnings per share were 22.5p (21.5p). A final dividend of 5.1p will raise the total to 8.6p (7.75p).

Nichols said it would finance the cost of the share buy-back, £8.22m once £1.7m in advance corporation tax is included, initially through cash resources and some borrowings. Gearing would rise to 24 per cent of shareholders' funds after the purchase.

The company said that in 1988 it had started to see the benefits of the reorganisation and consolidation that took place in 1987 and was confident that there would be continuing and increasing progress in 1988 and the years ahead.

The Vimto brand had shown substantial progress in both the UK and overseas markets, especially in the Middle East, where Vimto had been produced in Iraq for the first time.

● COMMENT

B&C's bailing out of Nichols should come as no surprise. It is also trying to sell its 24 per cent stake in Appletree Holdings, the fresh produce supplier, as part of an effort to focus on core financial services. The deal seems sensible for both parties – with Nichols cashing in its equity portfolio to finance most of the deal – and should have a beneficial effect on earnings per share as long as the promised increase in trading profit comes through. If the buy-back goes through, analysts are forecasting a pre-tax profit of £6.25m for the full year for a prospective p/e of 10.6.

Shandwick and Foote Cone talks progress

By Nikki Tait

DISCUSSIONS between Shandwick, the international public relations company, and Foote Cone & Belding, a US advertising agency, over a possible deal involving the latter's Golin/Harris Communications PR business, are understood to be progressing. An announcement could be made later this week.

If the deal goes ahead, a purchase price of around $25m-$30m is likely to be put on Chicago-based Golin/Harris. The company ranked as America's 11th largest public relations operation in 1987.

Such a purchase by Shandwick would probably be structured on an "earnout" basis - so that certain payments are deferred and profits-related. It seems likely the deal could involve the issue of some shares to FCB, and that the US group might end up with a stake of around 5-6 per cent in Shandwick.

The deal would also represent the largest move to date for Shandwick in the US. During the past two years, the UK-based group has been fairly acquisitive in North America, and by last autumn was employing over 500 people there. Its North American interests accounted for about one-third of group turnover.

Hicking Pentecost

Robertshaw Holdings, the private property development company run by Mr Stuart Robertshaw, has increased its stake in Hicking Pentecost, the Nottingham-based knitwear manufacturer and dyer.

A purchase of 35,000 shares takes its total holding to 15.27 per cent. It was announced on Monday that Robertshaw had acquired a 14.83 per cent stake.

Irish Glass expands

Irish Glass, Dublin-based glass container maker, achieved pre-tax profits of I£1.45m (£1.2m) for the half year to December 27 1988, compared with a previous £577,000.

Turnover was I£15.98m (£14.91m). Earnings per share stood at 6.56p (3.02p) and an interim dividend of 1p (0.75p) will be paid.

Allied-Lyons agreed offer for Canadian distiller

By Lisa Wood

ALLIED-LYONS, the food and drinks group, has made an agreed C$116m (£55m) offer for the publicly-held shares of Corby Distillers, a Canadian drinks company in which it has a major voting stake.

Corby is a manufacturer and distributor of wines and spirit brands including Wiser's Deluxe and Silk Tassel Canadian whiskies, the second and fourth largest standard brands of Canadian whisky respectively.

These were acquired last year with its C$46m acquisition of McGuinness Distilleries in Canada from Heublein, the drinks group acquired by Grand Metropolitan.

Hiram Walker, Allied's Canadian subsidiary, which owns 51.8 per cent of the voting shares and 14.5 per cent of the non-voting class B shares of Corby is offering C$32 for both categories of shares.

The offer is conditional on, among other things, acceptance by holders of at least 90 per cent of the shares in each class not already owned by Hiram Walkar and its affiliates.

Allied-Lyons said the non-executive directors of Corby, after taking expert advice, had recommended that shareholders should accept the offer.

Allied acquired Hiram Walker and its brands including Ballantine's Canadian whisky two years ago as part of its strategy to become an important player in the international drinks industry, alongside companies such as Seagram, Guinness and Grand Metropolitan.

It said a 100 per cent stake in Corby would give it more flexibility with the business with some savings to be made particularly on the administrative side.

The highly-taxed Canadian drinks market has shown little growth in recent years and Hiram Walker's proposed acquisition is another example of the rationalisation and concentration that has been occurring both in that market and the rest of the world.

Guinness disposal

Guinness, the drinks group, has sold its Cranks chain of vegetarian restaurants to Bewley's Cafes, an Irish catering company, for more than £2.2m.

The chain was acquired by Guinness in late 1985 for about £1m and has been built up to 10 outlets, mainly in London.

Mountleigh stake

Mr Tony Clegg, chairman of Mountleigh Group, has re-established a holding in the property company through the purchase of 500,000 shares, 0.2 per cent of the total, at 165p. Mountleigh shares closed yesterday unchanged at 164p.

HIT takes 43% stake in Comac

Hillsdown Investment Trust, the investment subsidiary of Hillsdown Holdings, yesterday became involved in yet another reconstruction package of a public company when it agreed to take a 43 per cent stake in Comac, the Third Market computer staff recruitment company.

Comac joined the Third Market in 1987 but the effects of the October stock market crash caused a slump in demand for computer staff in the City. The company revealed yesterday that it had made a pre-tax loss of £489,000 in 1988.

The losses put the group into a critical financial position and it approached HIT, which was seeking an investment in the recruitment field. HIT has now agreed to subscribe for 2.75m shares at 20p each. At the same time there will be a three-for-five rights issue at the same price. The total package will raise £700,000.

Mr Christopher Childs will resign as Comac chairman and he and Mr Mark Philbrick will leave the board. Mr Michael Hacker and Mr Michael Teacher, directors of HIT, will join the board as chairman and finance director.

Comac plans to move to the USM to enable it to expand, via acquisition, in the recruitment sector.

Comac sharea closad unchanged yeaterday at 48p.

Trusthouse Forte

The pay of Lord Forte, chairman of Trusthouse Forte, fell slightly in 1987/8 to £229,989, against £230,222. The salary of the highest-paid director, believed to be Mr Rocco Forte, chief executive, rose from £234,577 to £268,287.

In his annual statement Lord Forte said results in the first three months of 1988/9 had been encouraging. A partial property revaluation resulted in a surplus of £719m, giving total fixed assets of £3.26bn.

Adscene stake

H P and S E Lambert, Adscene directors acquired 1,000 ordinary to hold 12.63 per cent.

DIVIDENDS ANNOUNCED

	Current payment	Date of payment	Corres - ponding dividend	Total for year	Total last year
Bank Leumi ......fin	9.4	Apr 14	8.5	13.5	12.4
Conti Indl Trust ......fin	30	-	30	50	50
Ewart ......int	0.75†	Mar 23	0.5	-	1.7
Gartmore Info ......int	1.025	-	0.875	1.45	1.3
Irish Glass ......int	1♣	-	0.75	-	3
NatWest Bank ......fin	19	May 5	18	28.25	24
Nichols Vimto ......fin	5	-	4.6	8.6	7.75
Peters (Michael) ......int	1.7 §	Apr 12	1.5	-	3.7
Provident Fincl ......fin	12	Apr 13	11.5	16	16
Realty Useful ......int	2	Apr 6	4.5	-	15
Yorks Chemicals ......fin	7	Apr 14	5	10	7

Dividends shown pence per share net except where otherwise stated. *Equivalent after allowing for scrip issue. †On capital increased by rights and/or acquisition issues. §USM stock. §§Unquoted stock. ¶Third market. ♣Irish pence throughout.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the subdivisions shown below are based mainly on last year's timetables.

TODAY

Interims- Creston, FII, SWP, Usher (Frank).
Finals- Foreign & Colonial, Taveners.

FUTURE DATES

Interims-	
Armstrong Equipment	Mar. 16
Brierley Investments	Mar. 9
Gent (SR)	Mar. 15
Glaxo	Mar. 13
Goodwin	Feb. 28
Lincat	Mar. 9
Medminster	Mar. 14
Finals-	
BSG International	Mar. 21
Conroy Petroleum	Feb. 28
Evans Halshaw	Mar. 20

Never mind the price – if the shoe fits . . .

Philip Coggan on Chamberlain's dilemma in deciding which offer to recommend

WHAT TURNS a company into a bid target? Shareholders in Chamberlain Phipps have witnessed a 3.4 per cent decline in the group's earnings per share since 1984 – and in fact, the company has yet to improve on its 1980 eps figure.

Chamberlain's long-standing shoe components business is notoriously cyclical and vulnerabla to overseas imports and problems in the group's chemicals and adhesives division mean that it will fail to increase profits this year.

Yet this unpromising track record has prompted no fewer than three takeover bids for the Northamptonshire-based company over the past two years.

Chamberlain first saw off a £62m offer from Wardle Storeys, the plastics sheeting and survival equipment group, in 1987. Then, earlier this month, Evode, the speciality chemicals and plastics group, launchad an all-share offer after a sudden leap in Chamberlain's share price. A slightly improved Evode offer was recommended by the Chamberlain board last week.

Yesterday's intervention by Bowater Industries – launching a cash bid at 220p per share and buying around 7 per cent of Chamberlain's equity – makes a successful Evode bid look extremely doubtful.

The Evode offer – 10 ordinary and 21 convertible preference shares for every 20 Chamberlain ordinary – values each Chamberlain share at 198.6p and the whole of the company at just under £75m. A higher offer is likely to dilute Evode's earnings, which might be tricky for Evode's directors to justify to its shareholders.

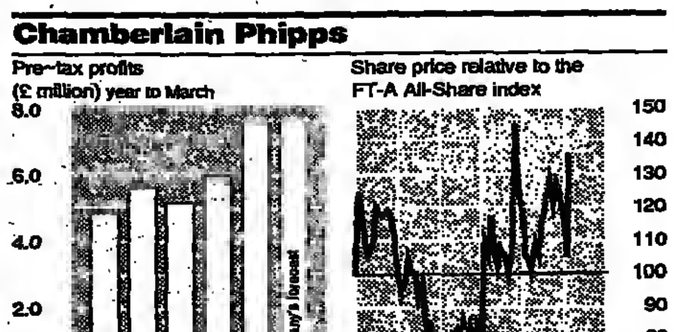
So what is it about Chamberlain that attracts so many suitors? "It has interests in a number of businesses where there is potential for profits growth," said Ms Jinty Price, an analyst at Barclays de Zoete Wedd, yesterday.

Those businesses are largely concentrated in the adhesives and sealants division although Mr Brian Taylor, Wardle Storeys's managing director, claimed during his bid that his group could bring management strengths to a company which had indulged in an "ill-judged and poorly directed" diversification strategy.

Evode has more industrially-based arguments. It convinced Chamberlain that a merger of the two groups' adhesives and sealants businesses would create a business large enough to compete in the worldwide market.

In addition, Evode and Chamberlain have interests in common in thermoplastic elastomers and automotiva products. And Evode is also involved, although on a much smaller scale than Chamberlain, in shoe components.

Even Bowater's chief executive, Mr David Lyon, admits that there is logic in an Evode-Chamberlain merger. However, he says that a Bowater takeover would have a different, and equally valid, logic.



The fit between Bowater and Chamberlain, according to Mr Lyon, lies in Bowater's coating and laminates division which largely centres on Rexham, the US company, acquired for $226m just after the 1987 stock market crash.

Mr Lyon argues that Rexham, which produces high-tech, custom-made chemicals and laminates, would bring important technological benefits to Chamberlain'a adhesives and sealants business. Moreover, acquiring Chamberlain would allow Rexham to develop brand name products appealing to a wider range of customers.

Bowater would hang on to Chamberlain's shoe components business which it says has a strong position in its market and good cash-generating powers.

The Chamberlain bid represents the latest in a series of disposala and acquisitiona made by Bowater since new management under Mr Norman Ireland, formerly finance director of BTR, and Mr Lyon, a former managing director of Redland, the building materials group, joined the group in 1987.

Bowater now has four main divisions, breaking down in profits terms roughly as follows: printing and packaging (40 per cent), coatings and laminates (15 per cent), building materials (15 per cent) and Australia (30 per cent).

Mr Lyon said the two divisions selected for immediate growth were coatings & laminates (as illustrated by the Chamberlain bid) and printing & packaging, where Bowater recently acquired a 25.7 per cent stake in Norton Opax.

Disposals will raise more than £140m in the first quarter of the year and a successful hid for Chamberlain would therefore leave Bowater less than 50 per cent geared. There will be minimal earnings dilution in 1989 bnt Mr Lyon expects Chamberlain to have a positive effect on earnings by late 1990.

The Chamberlain board now faces a difficult decision. Having agreed to surrender its independence to Evode, it may be hard for them not to recommend the highest offer available.

There is a precedent, however, for a board to recommend a lower offer. Last year, the board of Travis & Arnold opted for an offer from fellow builders' merchant Sandell Perkins rather than a higher hid from Meyar International. The Travis Parkins deal went through.

However, the Sandell bid was backed from the start by holders of 39 per cent of Travis's equity, largely directors' familiea and associates; the Chamberlain board owns only a tiny percentage of the shares.

In the end, hard financial considerations normally carry the day. As Ms Price said yesterday "I don't think there is any doubt that there is a lot more logic in Evode taking over Chamberlain than in Bowater doing so. But institutions may find it hard to resist the cash."

Capco beats forecasts with £43.5m

By Clare Pearson

CAPITAL & COUNTIES, the property group which is a subsidiary of South African-controlled TransAtlantic Holdings, yesterday surpassed City expectations with its increase in pre-tax profits and net asset value for the year to end-December.

Pre-tax profits rose 75 per cent to £43.5m. The rise was helped by a turnaround from a net interest payable figure of £1.6m to £7.1m receivable, reflecting a £168m rights issue in July 1987 as well as capitalisation of interest on the development programme.

The revaluation surplus on investment properties was £122.6m of which the UK contributed £120.8m. Total assets reached more than £1bn, a 42 per cent increase. Net assets per share rose 23 per cent to 492.5p (400.6p).

Mr Ray Moorman, managing director, said the major elements in the revaluation surplus were the properties in London's West End properties, some of which were boosted by 50 per cent, reflecting the growth in rental levels during the year.

Earnings per share were 22 per cent higher at 20.3p (16.6p). The final dividend is increased to 6.25p (5p), making 10.5p (8.5p) for the year.

Property investment contributed £31.9m (£25.4m) to operating profits on a turnover of £51.1m (£43m). Property trading put in £8.8m (£4.6m) on £22m (£18m) turnover.

Capco's element of its development programme amounts to £600m. The most important elements are three projects at Bromley, Watford and Thurrock, Essex totalling 2.25m sq ft. During the year the company acquired sole control of the Thurrock development, buying out Pearson, its partner, for £64m in shares.

After various financing arrangements last year, the company has this month arranged a £400m seven-year syndicated loan facility.

Mr Moorman said despite the gloom currently overshadowing the retail sector, Capco had seen no signs of weakening in interest from retailers.

● COMMENT

Whatever adverse sentiment may surround companies as heavily involved in retail property as Capco is, in fact it is this area of its business that provides the chief source of interest as the company awaits the substantial surpluses which will be coming through on on its three major developments. These - and especially Thurrock, which is the only major shopping centre development on the M25 motorway to have received planning consent, and is due to be completed in 1990 - could hardly be better positioned and are all, according to the company, proceeding to budget. Prospects for these developments, together with the extremely high esteem in which followers hold the management, may suggest that the shares at yesterday's price of about 380p against a 555p forecast for net assets per share for the year to December, are rather cheap. However, their limited marketability argues against them.

● TransAtlantic Holdings reported pre-tax profits of £52.5m (£39.1m) for 1988. Earnings per share were 15.53p (13.14p) and net assets at the end of the period were 381p, against 336p a year earlier. Mr Donald Gordon, chairman, said December 1990 is expected to see net assets standing at about 630p per share.

Gartmore Info asset fall

NET ASSET value per 25p share of the Gartmore Information & Financial Trust declined from 56p to 52.6p over the 12 months ended December 31 1988.

However, despite difficult trading conditions earnings per share edged ahead to 1.68p (1.62p) and a final dividend of 1.025p raises the total from 1.3p to 1.45p.

For the current year the trust will concentrate the UK element of its portfolio into fewer stocks, comprising a mixture of large capitalisation issues and some substantial interests in smaller companies offering above-average growth.

Mosaic Invs buys John Anthony Signs for £4m

By Andrew Hill

MOSAIC INVESTMENTS, the expanding industrial holding company, has moved into another fragmented market with the acquisition of John Anthony Signs for up to £4.11m in shares.

The acquisition, and a placing of further new shares to raise £975,000 for future purchases, will dilute the 25 per cent stake held in trust by Mr Gregory Hutchings and his family to about 15 per cent. Mr Hutchings is chief executive of Tomkins, the industrial group.

JAS makes and installs illuminated and non-illuminated signs and will form part of Mosaic's consumer products and services division.

Mr David Williams, Mosaic's development director, said yesterday: "We see the acquisition as another tile in place."

Greg Hutchings: chief executive of Tomkins

Mosaic is paying an initial £3.11m for JAS, with a further £1m payable if pre-tax profits reach £1.27m in any of the financial years up to April 30 1992.

In the year to August 31 1988, JAS made a profit of £629,000 before tax on sales of £2.7m.

Most of the 1.17m ordinary new shares to be issued to JAS will be placed out with institutions, as will a further 496,110 shares in an additional placing. They will be offered to shareholders at 265p a share, against yesterday's closing price of 285p, down 5p, on the basis of one new share for every five held.

The group's other interests include industrial products, and bar and catering accessories.

Really Useful stages poor performance at six months

By John Thornhill

REALLY USEFUL, Mr Andrew Lloyd Webber's leisure group, staged its first poor financial performance yesterday when it reported a fall in pre-tax profits to £2.8m in the six months to December 31, a 3.4 per cent decrease from £2.9m in the previous period.

Turnover rose to £12.3m (£11.6m), but earnings per share dropped to 15.9p (16.4p).

Mr Keith Turner, director, said that the fall in profits had been the result of the "failure of the subsidiary activities to come on stream." In particular, he mentioned the disappointing performances of Aurum Press, its publishing company, Interactive Information Systems and The Really Useful Record Company.

He said that the principal core activities remained sound, however, and that the board's decision to declare an increased interim dividend of 5p (4.5p) was a sign of its confidence.

Although revenue from Cats was now declining, Phantom of the Opera was still increasing its contribution. A new show, Aspects of Love, is due to open in London this spring. Immediately afterwards, the concert presentation division will undertake a major tour throughout North America.

The interim results included an exceptional £883,000 profit on the sale and leaseback of a freehold office in Soho. But this was almost balanced by an £800,000 exceptional charge reflecting the cost of compensation to Mr Brian Brolly, the former managing director who left Really Useful at the end of last year.

Michael Peters surpasses City hopes with advance to £1.07m

By Alice Rawsthorn

MICHAEL PETERS, the USM-quoted design group, saw its shares rise by 9p to 124p yesterday when it surpassed the City's expectations by announcing a sharp rise in pre-tax profits from £530,000 to £1.07m in the first half of the year.

The City had expected a smaller increase because of the problems of Hambrecht Terrell International, the US retail design company that Peters bought a year ago. HTI has been hit by the downturn in US retail design and by the disruption caused by Campeau's bid for Federated Stores, one of its biggest clients.

HTI broke even in the first half and is expected to make a small profit in the second. The contribution from Peters' other acquisitions and new ventures, such as corporate identity, combined with organic growth in the established business compensated for its poor performance.

The group saw sales increase to £18.06m (£7.52m) in the six months to December 31. Earnings per share rose to 5.11p (4.63p) and the interim dividend is raised to 1.7p (1.5p).

Peters' activities now embrace six areas. The two largest - packaging and brand identity together with architecture and retail interiors - accounted for over half of its sales in the interim period. It is also involved in corporate literature, product development, specialist communications and corporate identity.

Mr Michael Peters, chairman, said every area had fared well in the first half and all the UK companies increased their involvement with projects in other countries. The growing awareness of design in Europe, coupled with the competitive pressure on consumer goods companies, should, he said, ensure a strong performance for the full year.

Since the end of the interim period Peters has expanded in specialist communications by buying Communiqué in Canada. It has also acquired John Nicholson Associates, a management pyschology consultancy in the UK. The group's gearing now stands at about 70 per cent.

According to Mr Peters, the group is now established in its major areas of activity. It may make some small acquisitions in the next year or so, he said, but was ready to "move forward fairly rapidly".

Windsor predicts return to dividend in current year

By Nikki Tait

Mr Stanley Taylor, chairman of Windsor, told shareholders at yesterday's annual meeting that he expected the company to recommence paying dividends after publication of figures for the current year.

Income in the first four months of the current year was slightly above budget, he said, and expenses were as anticipated. Provided the situation was maintained, he predicted a "reasonable" trading profit for the year.

He did, however, point out that most of the company's profit came in the second half.

The company, which has made a number of acquisitions over the past few years and also seen several key management changes, made a £103,000 loss before tax in the 12 months to end-September and passed the dividend.

The loss, however, was after a £330,000 exceptional charge - largely due to consultancy fees.

Provident Financial just ahead

By Clare Pearson

PROVIDENT FINANCIAL Group, the consumer lender with about 10,500 door-to-door agents, lifted pre-tax profits from £26.7m to £28.2m in 1988 on turnover of £417.7m compared with £409.4m.

Slow growth continued in its chief activity of providing weekly-collected credit. It has been pursuing a policy of concentrating on repayments rather than the issue of new credit. This was conceived after a rise in arrears two years ago, triggered by an earlier drive for growth.

Modest turnover growth in the core business was reflected in the retail business, which sells goods to credit customers. With the additional problem of reorganisation costs at one of the retail headquarters, retail profits halved to £660,000.

Mr Peter Hogg, deputy managing director, said growth in the core business should be stronger this year thanks in part to a new, fixed-denomination shopping voucher.

After tax of £9.59m (£9.93m), earnings came out at 37.15p (36.07p). The final dividend is 12p (11.5p), making 18p (16p).

● COMMENT

Provident's share price slipped 15p to 348p yesterday partly because its statement that this year will see a resumption in growth in the core business struck a hollow note. There are bound to be question marks over the vigour of its new-found marketing drive in the light of its obsessive concentration over the last three years on keeping the backsliders off its lending books. And its report that demand for consumer credit was sluggish in the pre-Christmas period does not help: why this should have happened, since its predominantly council house tenant clients are hardly interest rate sensitive, is not clear. Meanwhile, its other financial interests look a bit too diverse for comfort. The main attraction of the shares is the yield of around 7.5 per cent. This assumes Provident makes £30m pre-tax this year, to give a prospective p/e of over 8.5.

Ewart in midterm upsurge

EWART, the Belfast-based property developer, showed a substantial increase in turnover and profits for the six months ended October 31 1988 following the integration of West Kent Cold Storage, acquired last May.

Mr John McIlroy, chairman, said the development potential of West Kent site was being assessed, and early indications point to it being "most exciting".

Figures for the half year, on a merger accounting basis, saw turnover advance from £2.64m to £3.49m and pre-tax profit from £179,000 to £522,000. Earnings rose to 2.59p (0.88p) and the interim dividend is lifted 50 per cent to 0.75p, and is payable on capital increased by a rights issue.

The chairman said the company had net assets of £18m (1.17p per share) and a development programme of some £70m in various projects, both wholly-owned and joint ventures. These should provide a substantial profit stream over the next few years to complement investment income from existing properties and subsidiaries.

Mr McIlroy said it was hoped to start trading in the Republic of Ireland before the end of the financial year. Proposals were in hand for a listing in Dublin.

Continental and Ind

Net asset value per 25p ordinary share of Continental and Industrial Trust was virtually static at 910.5p on December 31 1988, compared to 910.2p a year earlier.

Profit before tax was £13,847 (£13,642) and earnings per share were 53.31p (52.39p). The final dividend is 30p for an unchanged 50p total.

Bank Leumi (UK)

Profits of Bank Leumi (UK) for the 1988 year rose from £1.94m to £2.63m after tax and transfer to inner reserves. Retained profits emerged at £1.74m compared with £1.17m.

A final dividend of 9.4p lifts the total from 12.4p to 13.5p. Shareholders are again offered a cash or share alternative in respect of the final payment.

Unilever set to buy Dutch food maker

By Christopher Parkes, Consumer Industries Editor

UNILEVER, the food and consumer products multinational, is negotiating to buy Profood, a private Dutch manufacturer of chilled convenience foods.

Profood was set up in 1987, and makes mainly pasta dishes which can be kept fresh in a refrigerator for several weeks. It employs 35 people at Oldenzaal in the eastern Netherlands, supplies some 600 Dutch outlets, and recently started exporting to Scandinavia.

Financial details were not disclosed.

The deal will give Unilever a ready-made factory and access to new microwave pasteurisation technology which may be used elsewhere in its international food operations.

Although it is one of the largest food manufacturers in the world, the group's only existing interest in chilled food is a small operation in Nantes, which sells Plaisir à la Carte products in France.

Convenience meals, which need no preparation beyond heating, and pasta have both been earmarked as priority areas for expansion by the board. It is especially interested in products with a long shelf life, which might be distributed from central manufacturing sites across large markets such as the US and, after completion of the internal market in 1992, the European Community.

Piccadilly Radio delays merger decision for another month

By Ian Hamilton Fazey, Northern Correspondent

PICCADILLY RADIO's much-adjourned extraordinary general meeting was adjourned twice more yesterday before shareholders finally agreed to put off until March 20 a decision on whether to merge with Midlands Radio.

The meeting had been originally scheduled for February 6 but was postponed for two weeks after Miss World, the local radio and entertainment company, launched a £35m bid for Piccadilly.

Shareholders eventually gathered in Manchester on Monday but an increased offer from Miss World - worth £39m, or about 400p per voting share - caused a series of adjournments as Piccadilly directors retired to consider their position.

If shareholders hoped that matters would be settled yesterday, they were disappointed.

The actual business of the meeting occupied little more than three minutes in aggregate but those minutes were spread over nearly 2½ hours while the Takeover Panel agonised in London over whether to allow the Midlands merger plan to be extended past its February 27 deadline.

The panel initially wanted Midlands Radio's consent to the extension, but Midlands wanted a vote on the issue. In the end, the panel decided to grant Piccadilly's request.

The meeting decided instead to vote on amending Piccadilly's articles, a process requiring at least 21 days' notice of a special resolution, hence the need for another adjournment.

Owen Oyston: details will be forthcoming

Miss World's bid can succeed only if 75 per cent of shareholders agree to change the company's articles so as to allow a single shareholder to own more than 15 per cent of the company's voting stock.

When the meeting resumes again, the vote on the merger with Midlands will be put second. If the first vote is in favour of amending Piccadilly's articles, this will represent consent for the company to merge with Miss World rather than Midlands.

Miss World, which operates the Red Rose radio chain, has made rejection of the merger with Midlands a condition of its bid. The Independent Broadcasting Authority forbids radio stations under one ownership to cover more than 15 per cent of the total UK audience, a limit which would be breached by a Red Rose/Piccadilly/Midlands combination.

Barclays de Zoete Wedd, Piccadilly's adviser, warned the board that the price Miss World was indicating was too good to be rejected before all shareholders had been given time to study it in detail.

"The issues will now be voted on in a logical order, so that everyone will be certain of what they are doing," one adviser said after the meeting.

Mr Owen Oyston, Miss World's chief executive, indicated that full details of the company's offer would be forthcoming. He said after the meeting: "It has been a very satisfactory day from our point of view."

However, he has not won yet. Piccadilly's board, which controls 18 per cent of the voting stock, was still against him yesterday, and was counting on support from Allied Entertainments and Albion Nominees, which have 11 per cent between them, to block the constitutional change.

Heavy lobbying by both sides is expected during the next four weeks.

UK COMPANY NEWS

Yorks Chemicals surges to £8.5m

By John Thornhill

SHARES IN Yorkshire Chemicals, the manufacturer of dyes, tanning materials and speciality chemicals, jumped 21p to 316p when the group announced a 35.9 per cent increase in pre-tax profits in the year to December 31.

The profits increase, from £6.25m to £8.5m, was achieved on turnover up 20.7 per cent to £59m (£48.9m). Earnings per share rose 36.7 per cent to 36.5p (26.7p) and a recommended final dividend of 7p will make a total of 10p (7p).

Yorkshire said the rise reflected fundamental improvements in manufacturing and marketing efficiencies and an encouraging contribution of £415,000 profit from Nachem, the Boston-based speciality chemicals manufacturer which it acquired in May 1988.

Overseas sales rose by 26 per cent to £51m, but turnover in the UK fell to £7.9m (£8.3m).

Mr Phillip Lowe, chairman, said yesterday that he was impressed with the results but thought they could have been a "hell of a lot better" had it not been for the high exchange rate and problems with sulphones production at its Selby site.

He estimated that sterling's strength had reduced operating profits by about £1.7m.

Trading conditions had been mixed during the year, he said. Demand for textile dyestuffs and speciality chemicals had been strong, but the market for leather process chemicals was depressed, particularly in the UK.

Operating profits by division were: colours £6.4m (£4.9m); speciality products £1.2m (£1.8m); Australia £1.1m (£864,000); and Americas £415,000.

Capital investment and acquisition expenditure was £6.5m compared with £4.1m in 1987. This was financed from trading cash flow and the group remained ungeared at the year end.

● COMMENT

Yorkshire is certainly no pudding when it comes to producing profits. These results were ahead of City expectations, accounting for tha steep rise in the share price. The cyclicality of the dyestuffs industry and the poor state of demand in the UK textiles and tanning industries causes some reservations, but strong overseas sales provide a good safeguard. The tax charge will rise this year to about 30 per cent, as ACT credits run out, which will impinge on earnings growth but the group believes that it will be able to maintain its current momentum in future years; an opinion shared by many analysts. Forecasts are difficult to make given the group's uncanny habit of confounding them, but assuming a pre-tax profit of £10m, the prospective p/e ratio would be about 8. The group claims that since 1983 it has consistently achieved the highest rate of growth in earnings per share of any UK quoted chemical company. On that form, Yorkshire's shares look decidedly under-rated.

Doctus directors in rescue plan for Spice

By Andrew Hill

THREE DIRECTORS of Doctus, the quoted management consultancy, are to provide an injection of cash and new management for Spice, the troubled motor parts distributor.

Mr Richard Fleming, Doctus's chief executive, is to become Spice's managing director, and a rights issue will raise about £3m, in an attempt to return Spice to profit.

Spice is to issue 7.07m new ordinary shares on the basis of five new shares for every six held, at 45p each compared with yesterday's closing price of 70p, down 8p.

Major shareholders, including Mr Gordon Spice, the gronp's chairman, have renounced their rights in favour of an investment partnership, Blake Birchall and Fleming, set up to underwrite part of the issue.

The other founders of BBF, which will hold up to 28.6 per cent of Spice's enlarged capital, are Mr Brian Blake, Doctus's chairman, who will take over the chief executive role at Doctus from Mr Fleming, and a third Doctus director, Mr Alex Birchall.

Spice's last managing director resigned in December, when the company warned that it would do little better than break even in the year to September 30. The finance director resigned a month later, jnst before Spice announced a drop in pre-tax profits from £1.26m to just £23,000.

The company said yesterday that investigations had revealed severe accounting and cash flow prohlems caused mainly by computer systems failures at the group's new National Distribution Centre.

Richard Fleming: Spice badly needed help

Mr Fleming said Spice badly needed help managing the change to computerised national distribution. When NDC was set up last year, Spice's different computer systems were unable to "talk" to one another, he said, and concentrating on NDC and acquisitions had distracted the company from the core automotive parts husiness.

BBF had been set up to invest in troubled situations, added Mr Fleming, in particular where it could have a say in the management of underperforming companies. He said the partnership would look at further investment opportunities among quoted groups, but was more likely to fund private husinesses.

Cityvision acquires another 25 outlets

By Nikki Tait

CITYVISION, which operates one of the largest chains of video rental shops in the UK, is buying a further 25 outlets for a maximum of around £3m.

Sixteen of the stores are owned by a private company called Seed and Schofield, which trades as Variety Video and has outlets principally in the North-West. It is represented in Accrington, Blackpool, Preston, Wigan and Widnes. It also has plans to open a further four stores.

Cityvision is paying the equivalent of annual turnover for the group. But, because of new store openings, part of this is on a deferred basis. At the outset £1.65m will be paid, of which a maximum £750,000 comes in cash and the remainder in Cityvision shares.

The additional consideration will be become payable at end-1989. Cityvision says that annual turnover at the group is "in excess of £2m" - and that it expects the deferred amount to be around £700,000.

The second purchase is Central Mark, which trades at Cinema 625. It has nine stores, stretching from Leeds to Cleveland. Turnover is around £1m.

Initial payment is £300,000 in Cityvision shares. A further maximum £500,000 is payahle based on net rental turnover for the six months following completion.

Cityvision says that both businesses are operating profitably. It now has over 250 stores in the UK, and aims to have between 300 and 400 by the end of the year.

COMMODITIES AND AGRICULTURE

Judge rules ITC members do not have immunity

By Raymond Hughes, Law Courts Correspondent

FOREIGN STATES who are members of the International Tin Council do not have sovereign immunity against damages claims based on alleged reckless or fraudulent misrepresentation brought against them by the ITC's creditors, a High Court judge has ruled.

Mr Justice Evans said yesterday that the states were subject to the jurisdiction of the English court because of the commercial nature of the transactions that gave rise to the creditors' claims.

However, the ruling may prove to be an empty victory for the creditors in their battle to be paid money the ITC owed them when it collapsed into insolvency in October, 1985.

It merely puts the foreign states into the same position as the UK which, the judge held, had a defence under an 1828 Act that would probably defeat the fraudulent misrepresentation claim.

Mr Justice Evans was giving judgment on applications by the ITC's members - the UK, 22 other states and the European Community - to strike out actions by six bank and nine broker creditors. The orders to be made as a consequence of his ruling will be decided at a later hearing.

Further issues remain to be argued, based on amendments the judge had earlier permitted to be made to the creditors' claims.

Both the creditors and the members are likely to challenge the judgment in the Court of Appeal and the expectation is that the Law Lords will be called upon to make a final ruling.

Last year the Court of Appeal ruled that the ITC's members were not liable in English law for its debts.

The bank creditors were Australia and New Zealand Banking Group (claiming £4.6m), Kleinwort Benson (£8.47m), Arbuthnot Latham (£2.33m), Banque Indo-Suez (£1.17m), Hambros (£7.11m) and the TSB (£5.99m).

The brokers, claiming payment of tin contract debts totalling £110m and unquantified damages, were Amalgamated Metal Trading, Boustead Davis (Metal Brokers), Gerald Metals, Gill & Duffus, Henry Bath & Son, Holco Trading Company, Metallgesellschaft, Metdist and Mocatta Commercial.

The allegations against the members were of false, fraudulent and negligent misrepresentation in respect of the conduct of the ITC's affairs, and fraudulent trading.

Mr Justice Evans held that the creditors' claims disclosed no cause of action against the UK either for negligent misrepresentation or for fraudulent trading.

The brokers had a good claim against the UK for fraudulent misrepresentation, he said, but 1828 Statute of Frauds (Amendment Act) gave the UK a defence to such a claim. The Act provided that no action should be brought unless the representation relied on was made in writing and signed by the defendant.

As the banks had not alleged fraudulent misrepresentation their whole claim against the UK failed, the judge ruled.

He held that creditors could claim to recover damages from the members if they could prove that the members acted "recklessly or in any other way fraudulently," but not otherwise.

The members were not liable merely because of negligence - if negligence there had been - in relation to the affairs, and in particular the likely solvency, of the ITC.

The basis for the members' liability was the commercial nature of the transactions: contracts made in the ordinary course of business on the London Metal Exchange or loans made by commercial banks.

"That commercial factor is both the strength and weakness of the (creditors') case. It enables them to defeat the claim for state immunity but it prevents them from establishing that any duty of care arose between the contracting parties or between themselves and the member states."

He said that the brokers had proved that the members states had taken part in the ITC's affairs to an extent which included giving to, and not withdrawing from, the ITC's buffer stock manager authority to enter into transactions.

The judge spoke of "the underlying commercial realities" which existed "even when states enter the market place or send their representatives there on their behalf, and regardless of whether the trading was successful or not."

A MAJOR Japanese bank, one of the 12 creditors of the International Tin Council, is believed to have managed, late last year, to sell all the tin it held as collateral following the council's 1985 collapse, reports Reuter from Tokyo.

An official at the Bank of Tokyo declined comment on recent sales. The bank is believed to have held warrants on about 6,000 tonnes tin at the time of the collapse.

Government officials said the bank had once held some tin as credit, but they said they had no knowledge of any sales.

A Malayan Banking executive said last week that his bank had sold most of its tin stock, estimated at around 7,000 tonnes.

Malaysian rubber output up sharply

By Wong Sulong in Kuala Lumpur

BUOYED BY favourable prices, Malaysia's rubber producers last year recorded the biggest increase in rubber output registered during the past 12 years.

Figures published by the country's statistics department yesterday showed that Malaysian natural rubber production during 1988 was 79,343 tonnes, or 5 per cent, higher than in 1987 at a record 1.658m tonnes. Output had been stagnant at around 1.5m tonnes a year throughout the early 1980s.

The average price for top grade rubber sheets - specifically RSS No. 1, the hedging grade - rose by about 25 per cent last year to 310 Malaysian cents (64p) a kilogram.

Prices would have been much higher were it not for the substantial sales made by the International Natural Rubber Organisation (Inro) buffer stock manager, who is now believed to have less than 10,000 tonnes at his disposal.

Despite the record production, Malaysian rubber exports for last year were only marginally higher, at 1.61m tonnes, than in 1987. So stocks at the end of the marketing year were valued at about 5.15bn ringgit (Malaysian dollars), an increase of some 1.23bn ringgit.

Major buyers were Singapore (305,000 tonnes), South Korea (167,000 tonnes), the US (135,000 tonnes), China (112,000 tonnes), Japan (95,000 tonnes) and West Germany (95,000 tonnes).

The figures show that the Far East has now overtaken the industrialised countries of the West as the major market for Malaysian natural rubber, a trend that is expected to continue.

Malaysian local consumption of natural rubber rose by 25 per cent to 103,000 tonnes last year, reflecting the great increase in production of examination gloves and condoms because of the AIDS disease, and the recovery in the local tyre industry.

The Malaysian Ministry of Primary Industries is forecasting firm rubber prices for the current year, with world consumption expected to exceed supply by about 100,000 tonnes, and the expected exhaustion of Inro rubber stocks.

Since January 16, the Inro reference price has been above the "must sell" level of 242 Malaysian/Singapore cents a kilogram, at which level the organisation's buffer stock manager is required to operate as a net seller in order to keep prices from rising too sharply.

Antwerp polishes up diamond sales

By Tim Dickson in Brussels

THE DIAMOND High Council of Antwerp - umbrella organisation for the Belgian diamond business - will announce later this week that its traders enjoyed a sparkling year in 1988 thanks to a 28 per cent increase in turnover to BF 410bn (£6bn).

A breakdown of the figures to be formally presented in Antwerp tomorrow shows that total imports (BF 231.9bn) slightly exceeded total exports (BF 229.6bn) over the period - a factor which "indicates a degree of stockpiling caused by the slowing down of sales," according to one council official.

Among other highlights imports of polished goods rose by 28 per cent to almost BF 80bn with India now the leading supplier, representing 19 per cent of Belgium's total by value, just pipping the Soviet Union (previously the largest and with 18 per cent this time), and Israel in third place (with 14 per cent).

Trade in rough diamonds - where Antwerp is the major centre after the Central Selling Organisation (De Beers) - also prospered in 1988 with imports totalling 93m carats, almost equivalent to estimated world annual production, and the major outside suppliers Zaire and Liberia overshadowed by a huge jump in imports of Australian rough stones from 1.5m in 1987 to 6m carats.

Diamond activities in Antwerp are five centuries old, being rooted in the city's open attitude to religion which attracted many Jewish dealers made unwelcome elsewhere, its geographical position as a major European port, and the renowned skills of its workforce which have helped to make "Cut in Antwerp" synonymous with quality worldwide.

The sector contributes around 7 per cent of Belgium's total exports (up from 6 per cent in 1987), comprises around 2,000 individual and often highly individualistic companies, many of them crammed into a square kilometre of the centre of the city, and employs about 30,000 people (of whom less than 6,200 now work in the cutting and polishing industry).

Unlike Amsterdam, which is probably much more closely associated with diamonds in the minds of the buying public, Antwerp concentrates almost exclusively on the wholesale trading, where it believes it is pre-eminent.

"People here hardly ever sell to a tourist, though we are trying to change this," explains a Diamond Council official. "If you walk round the diamond area of the city at a weekend you will notice that it is largely dead."

Competition and strong promotional activity from the Netherlands' most famous city to the North is therefore of little concern, not least since traders point out a shade smugly that most of the goods sold there are probably of Antwerp origin. More worrying is the state of the Belgian manufacturing (cutting and polishing) industry which by contrast with the good times being enjoyed by the trade continues to adjust to the lower labour costs of Far East rivals, and to learn to live with state subsidies provided by the likes of the Israeli Government.

Discussions are under way with the Belgian authorities for a package of support, including help with research, a possible lightening of the social security burden, and permission for greater flexibility in shifts to introduce 24 hour working. What will emerge from these negotiations remains to be seen, given that special pleading in other sectors such as textiles has not been wholly successful and given mixed political attitudes to the diamond industry in the wake of a much publicised (if unrepresentative) scandal three years ago.

There is some cause for hope, however, that the shake out in the industry may be past its peak, that employment may stabilise at the present level of around 6,200 (compared with 20,000 ten to 15 years ago), and that the application of new technologies encouraged by the Diamond High Council will pay off.

"We may be worried but we are not pessimistic," says one industry representative. "We are convinced, however, that with our training, structure, and craftsmanship - and the additional measures taken in the diamond plan - we can remain competitive."

Molybdenum rise ruled out

By Kenneth Gooding, Mining Correspondent

MR ALLEN Born, chairman and chief executive of Amax, the North American natural resources group, yesterday said his company was ready to boost substantially its output of molybdenum rather than see prices go too high.

Amax could bring back into production an annual 20m lbs of molybdenum within six weeks, he pointed out. Last year the group produced about 30m lbs but it has annual capacity of 65m to 70m lbs.

Total non-communist world consumption of the metal, used mainly in alloy and stainless steels, is widely expected to reach about 190m lbs this year.

"No-one has been banging on our door asking for extra moly," Mr Born added.

One of Amax's main rivals, Cyprus Minerals, recently raised its prices for technical grade molybdenum oxide from $3.60 a lb in drums to $3.90. Cyprus said it made the move because demand for molybdenum had turned out to be stronger than it expected.

Mr Born, in London to meet institutional investors, said he was "mystified" by the Cyprus increase. "There is no shortage of molybdenum as far as we are concerned. There might be a slight shortage of molybdenum concentrate - but nothing to upset the market place."

Amax had no present intention of following Cyprus's lead and increasing its molybdenum prices, he added.

Mr Born said the cash operating cost of Amax's primary molybdenum production was below $2 a lb following the restructuring of the business at a cost of $395m in 1987.

He reported that last year Amax generated $40m of cash flow from molybdenum and a pre-tax profit of $15m.

The 1982-87 collapse in molybdenum prices threatened the very existence of Amax, then the biggest primary molybdenum producer, according to some analysts. Its losses in those years totalled $5bn.

Analysts say that between them Amax and Cyprus, the two major producers of primary molybdenum (as distinct from metal produced as a by-product or co-product, mainly of copper), have brought the situation under control. Stocks in the non-Communist world which built up to 120m lbs by the end of 1986 have been reduced to an estimated 90m to 95m lbs.

Traders say that since last March Amax and Cyprus have tended to control any upward movement in the molybdenum price by maintaining a joint price of $3.60 a lb and the market was surprised to see Cyprus break ranks with an increase on February 8.

Analysts suggest Amax does not want molybdenum to move above $4 a lb because that would encourage other companies to bring mothballed capacity back into operation.

PNG to alter distribution of mine royalties

By Chris Sherwell in Sydney

THE PAPUA New Guinea Government is planning to alter the way it distributes the royalties and export proceeds it receives from local mining projects, in a bid to head off resistance to further developments.

The move follows violent protests and sabotage by traditional landowners in support of increased compensation from the copper and gold mine on Bougainville island, operated by CRA, the Australian resources group.

It also comes as the government considers approving the vast Porgera gold project in the Highlands, involving MIM Holdings, Renison Goldfields and Placer Pacific.

According to reports from Port Moresby yesterday, the new scheme will quadruple landowners' share of royalties, from five per cent to 20 per cent of the total, and bring a drop in the 95 per cent share currently going to the country's provincial governments.

As compensation, it was said that the provincial governments will receive one per cent of the total export value of minerals which come from mines in their area. The sum would be met from general revenue but covered by dividends from national government equity in the mines.

The change, announced by Mr Paul Pora, Finance Minister, is expected to apply both to existing and new projects.

WEEKLY METALS PRICES

All prices as supplied by Metal Bulletin (last week's prices in brackets).

ANTIMONY: European free market 99.6 per cent, $ per tonne, in warehouse, 2,080-2,140 (same).

BISMUTH: European free market, min. 99.99 per cent, $ per lb, tonne lots in warehouse, 6.50-6.65 (6.55-6.75).

CADMIUM: European free market, min. 99.5 per cent, $ per lb, in warehouse, ingots 7.90-8.10 (same), sticks 7.90-8.10 (same).

COBALT: European free market, 99.5 per cent, $ per lb, in warehouse, 7.35-7.65 (7.45-7.75).

MERCURY: European free market, min. 99.99 per cent, $ per 76 lb flask, in warehouse, 280-290 (same).

MOLYBDENUM: European free market, drummed molybdic oxide, $ per lb Mo, in warehouse, 3.90-4.00 (same).

SELENIUM: European free market, min 99.5 per cent, $ per lb, in warehouse, 7.90-8.50 (8.05-8.60).

TUNGSTEN ORE: European free market, standard min. 65 per cent, $ per tonne unit (10 kg) WO_3, cif, 55-64 (same).

VANADIUM: European free market, min. 98 per cent, V_2O_5, cif, 10.50-11.00 (10.90-11.25).

URANIUM: Nuexco exchange value, $ per lb, U_3O_8, 11.60 (same).

Tighter sugar balance forecast

By David Blackwell

THE SUPPLY and demand balance for world sugar this year could be markedly tighter than earlier indications suggested, according to the latest sugar market report from Gill & Duffus, the London trade house.

The company puts world output for 1988/89 at 107.42m tonnes, down from the 108.15m tonnes which it forecast in November. Consumption is put at 108.1m tonnes, up from the previous estimate of 107.85m tonnes.

The latest estimates leave a shortfall in production for the year of 640,000 tonnes. They are still above the revised 1987-88 figures of 104.2m tonnes for production and 106.1m tonnes for consumption.

The most significant change in production has occurred in the Indian subcontinent and the Far East, which are now expected to produce over a quarter of the world's sugar this year, according to the report. But expected increases there have been offset by a sharp drop in forecasts for the centrally planned economies of Eastern Europe and a continuing decline in South American output.

Consumption estimates have been raised to reflect greater demand expected in India and Asia.

The tight supply/demand balance will inevitably lead to a further drawdown in stocks, says the report, "and prices have been relatively firm in anticipation of this development."

However, an abundance of supplies for nearby delivery have kept price movements lower than might have been expected. Recent heavy purchases by Mexico have lifted prices, and they are expected to remain steady until the Soviet Union and China enter the market.

"At this point we would expect a further influx of speculative funds as well as the pressure of the trade hedging to push the market up sharply, possibly even to the levels seen last year."

WORLD COMMODITIES PRICES

LONDON MARKETS

COFFEE prices fell in afternoon trading in line with New York. Dealers said market sentiment was turning negative, given the lack of progress at the International Coffee Organisation meeting in London, where delegates were not hopeful about progress in talks about the coffee agreement's future. This was offsetting the fundamental tightness for nearby robustas, as shown by March's widening premium over May, they said. In contrast, copper prices on the LME advanced on the back of Comex. Traders said the market appeared to be making a belated bounce from recent lows reached after heavy bouts of Comex-led speculative liquidation in the absence of fresh bullish factors. Nickel prices closed ahead after earlier losses, steadied by talk of further substantial tonnages to be shipped from LME warehouses in March.

SPOT MARKETS

Crude oil (per barrel FOB)		+ or -
Dubai	$14.45-4.60q	-.005
Brent Blend	$16.80-6.85z	
W.T.I. (1 pm est)	$17.85-7.90q	
Oil products (NWE prompt delivery per tonne CIF)		+ or -
Premium Gasoline	$184-186	+1
Gas Oil	$141-142	+1
Heavy Fuel Oil	$77-79	+5
Naphtha	$166-168	+1
Petroleum Argus Estimates		
Other		+ or -
Gold (per troy oz)♣	$383.25	+0.75
Silver (per troy oz)♣	594c	
Platinum (per troy oz)	$540.86	+0.65
Palladium (per troy oz)	$143	
Aluminium (free market)	$2175	+30
Copper (US Producer)	135⅝-138c	
Lead (US Producer)	38.5c	
Nickel (free market)	850c	-5
Tin (European free market)	£4586	+30
Tin (Kuala Lumpur market)	21.62r	+0.12
Tin (New York)	368.5c	+3.0
Zinc (US Prime Western)	89⅝c	
Cattle (live weight)†	108.34p	+1.16*
Sheep (dead weight)†	143.53p	+3.32*
Pigs (live weight)†	78.75p	+0.84*
London daily sugar (raw)	$293.8u	+2.2
London daily sugar (white)	$318.0u	+0.5
Tate and Lyle export price	£278.0	+2.5
Barley (English feed)	£114z	
Maize (US No. 3 yellow)	£131.5	-0.5
Wheat (US Dark Northern)	£121.5v	
Rubber (spot)♥	58.25p	-2.75
Rubber (Mar)♥	66.25p	-1.75
Rubber (Apr)♥	66.75p	-1.75
Rubber (KL RSS No 1 Mar)	305.5m	-3.0
Coconut oil (Philippines)§	$525x	-5
Palm Oil (Malaysian)§	$387.5x	
Copra (Philippines)§	$350z	
Soyabeans (US)	$187.5x	+1.5
Cotton "A" index	61.35c	
Wooltops (64s Super)	650p	

£ a tonne unless otherwise stated. p-pence/kg. c-cents/lb. r-ringgit/kg. z-Mar. v-Apr/May. u-Mar/Apr. q-Apr. x-Feb/Mar. †Meat Commission average fatstock prices. * change from a week ago. ♥London physical market. §CIF Rotterdam. ♣ Bullion market close. m-Malaysian cents/kg.

COCOA £/tonne

	Close	Previous	High/Low
Mar	848	853	854 844
May	865	868	870 858
Jul	867	869	870 862
Sep	868	867	868 861
Dec	882	885	885 880
Mar	875	876	876 873
May	873	877	876 867

Turnover: 5035 (4157) lots of 10 tonnes
ICCO indicator prices (SDRs per tonne). Daily price for Feb 17: 1127.14 (1135.02); 10 day average for Feb 20: 1133.66 (1131.50).

COFFEE £/tonne

	Close	Previous	High/Low
Mar	1140	1143	1151 1132
May	1113	1123	1130 1106
Jly	1083	1095	1100 1080
Sep	1086	1085	1086 1086
Nov	1061	1075	1075 1067
Jan	1062	1072	1071
Mar	1060	1066	1057

Turnover: 2274 (2818) lots of 5 tonnes
ICO indicator prices (US cents per pound) for Feb 17: Comp. daily 116.39 (115.15); 15 day average 119.66 (120.06).

SUGAR ($ per tonne)

Raw	Close	Previous	High/Low
Mar	253.60	262.00	261.00 253.00
May	253.80	265.00	265.00 257.20
Aug	258.60	264.00	263.80 256.80
Oct	254.40	259.00	259.00 251.60
Dec	254.00	257.00	257.00
Mar	250.00	255.00	263.40
White	**Close**	**Previous**	**High/Low**
May	305.50	310.00	309.50 305.00
Aug	309.00	312.50	312.50 308.00
Oct	297.00	302.00	298.50
Dec	293.50	299.00	
Mar	289.00	294.50	294.00
May	287.00	292.50	292.00

Turnover: Raw 4945 (5006) lots of 50 tonnes. White 1032 (1225).
Paris- White (FFr per tonne): May 1925, Aug 1956, Oct 1881, Dec 1855, Mar 1845, May 1845.

LONDON METAL EXCHANGE TRADED OPTIONS

Aluminium (99.7%)	Calls		Puts	
Strike price $ tonne	Mar	May	Mar	May
2050	158	178	1	39
2150	69	114	12	75
2250	17	69	58	128
Copper (Grade A)	**Calls**		**Puts**	
2900	157	153	13	157
3000	85	112	41	214
3100	38	80	93	280

COTTON

Liverpool- Spot and Shipment sales for the week ending February 17 amounted to 1142 tonnes against 832 tonnes in the previous week. Trading was good with sales occuring in Russian and Paraguayan growths.

JUTE

C and f Dundee BTC $475, BWC $485, BTD $425, BWD $435; c and f Antwerp BTC $455, BWC $445, BWD $400, BTD $410.

LONDON METAL EXCHANGE (Prices supplied by Amalgamated Metal Trading)

	Close	Previous	High/Low	AM Official	Kerb close	Open interest
Aluminium, 99.7% purity ($ per tonne)						
Cash	2205-15	2135-45		2172-5		
3 months	2170-5	2115-20	2180/2125	2145-9	2180-5	

LONDON STOCK EXCHANGE

Setback for equities in late dealings

THE UK equity market fell victim to its own nervousness in late dealings yesterday. A sudden downswing in the stock futures market quickly overflowed into the underlying blue chips share sectors where early gains were replaced by losses in the face of some determined sellers.

The downturn, which came only in the final hour of trading, coincided with a sharp fall in sterling, which cast a cloud over prospects for a reduction in domestic rates. However, the London equity market had little time to respond either to currency developments or to early reports of the address to the US Senate Banking Committee by Dr Alan Greenspan, the head of the Federal Reserve. "It was the upset in the futures market that drove share prices lower," commented one leading securities trader.

Account Dealing Dates

First Dealings	Feb 13	Feb 27	Mar 13
Option Declarations	Feb 23	Mar 9	Mar 30
Last Dealings	Feb 24	Mar 10	Mar 31
Account Day	Mar 6	Mar 20	Apr 10

New time dealings may take place from 9.00 am two business days earlier.

Earlier, equities had extended the gain of the previous session, despite predictions by market specialists that London would be challenged when Wall Street returned to business after Presidents' Day to face Dr Greenspan's comments on the progress of the US economy.

The market's initial advance was encouraged by a favourable response to trading results from National Westminster Bank and particularly to its bonus share issue. At best, equities showed a gain of more than 10 FT-SE points before losing confidence as the time for Wall Street's opening drew near.

However, the Footsie was still in plus territory in late afternoon when it was undermined by weakness in the futures sector. By the end of the session, the FT-SE Index was a net 4.8 off at 2061.0, with the suddenness of the 15 point reversal displaying the nervousness beneath the surface. At best, the index touched 2076.3, inside the area identified by Mr Robin Aspinall of Schroder Securities as a "most likely" stopping point for the current rally.

The major institutions appeared to scent trouble yesterday. During the early part of the session, the big funds were taking up stock when offered, but they backed away when stock was offered during the downturn, according to one leading trading house.

Pharmaceuticals, established indicators of the mood of the international funds, had a mixed day, with Glaxo unsettled ahead of the trading statement expected in mid-March. ICI, with results due tomorrow, continued to slip lower.

Speculative stocks were more subdued yesterday. However, Consolidated Gold Fields continued to climb above the new terms from Minorco, with turnover higher as New York joined in the renewed excitement. The UK market is confidently waiting for the Gold Fields defence document, which is expected to tease out a higher offer from Minorco.

NatWest bonus pleases

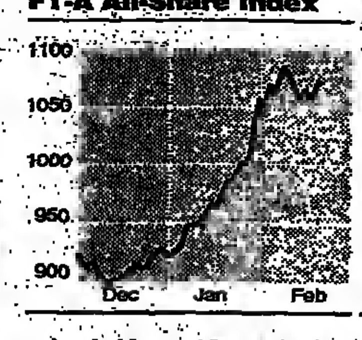
Any lingering nervousness about the preliminary profits from the big-four clearing banks was initially dispelled by results from Natwest. These came out at £1.407bn, and at the top end of market estimates, which ranged up to £1.41bn, and were some 15 per cent higher than the pre-provision figure of £1.22bn for last year.

Dealers and analysts were further pleased by the proposed one-for-one scrip issue; "a real bonus when allied to the final dividend which was better than any forecasts I knew of," said one analyst.

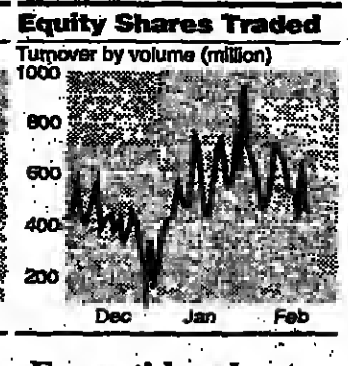
NatWest shares reflected the market's appreciative response to the figures, edging up to 625p at the day's best level. They subsequently fell back with the rest of the market and closed a shade easier at 617½p; turnover was well ahead of normal levels and expanded to 6m by the close.

The late decline in the shares was attributed by dealers to the uncertain trend on Wall Street when that market opened and to a flurry of switching trades into the other leading banks, especially Lloyds, which are due to report figures over the next few days.

FT-A All-Share Index



Equity Shares Traded



Local surprise

Shares in Local London soared in early trading after fellow property group Priest Marians unexpectedly launched a 550p-a-share bid for the company. To back the bid, which values Local London at £111m, brokers James Capel went into the market for Marians and bought 3.8m Local London shares at 550p cash before 10.30am, leaving Marians with 20 per cent of its target.

In tandem with Brent Walker's 29.9 per cent stake — the leisure group has pledged its support — Marians should succeed with its bid, said dealers. Marians made its offer on condition that Local London drop its own bid for leisure concern Marina Developments (down 5 at 495p), but one senior property analyst regards this condition as unimportant because between them Marians and Brent Walker have enough voting power to thwart the move for Marina.

While the performance of Local London shares was to be expected — they closed 47 better at 541p on turnover of 7m — the market was surprised by how well the Priest Marians price held up. After initially dropping to 412p, the shares rebounded sharply to close 10 better at 439p. Marketmakers said this was due to talk that Local London was worth £8-a-share to Marians if the group was broken up. However, analysts disputed this figure, and some observers claimed that after capital gains tax has been paid the figure is nearer £6-a-share.

Glaxo tests

Glaxo's sustained rise since the start of the year stalled after Robert Fleming Securities issued a "take profits" note. "We are expecting a 12½ per cent rise in earnings per share for the full year, and that doesn't justify trading at a 30 per cent premium to the market," said Mr Martin Hall, Fleming's pharmaceuticals analyst. "The shares historically underperform the market after interim statement — the interim is due in mid-March."

Fleming also noted that Glaxo faces several challenges in the coming weeks which could undermine the shares further. The two key events, said Fleming, are the launch in the UK next week of a rival to Ventolin, the branded prescription asthma drug, and a meeting of the advisory committee of the US Food and Drug Administration next month to consider approval for a rival to Glaxo's big selling ulcer drug Zantac. "Final approval would normally takes placa six to nine months after that meeting," said Mr Paul Woodhouse, pharmaceuticals analyst with Citicorp Scrimgeour Vickers. The shares lost 11 on the day, closing at 1260p.

Ferranti breakout

Defence and electronics group Ferranti topped the turnover league in the electronics sector with 11m shares changing hands as the stock rose 5 to 113p, breaking through a significant chart point at 110p, according to traders.

Broker Henderson Crosthwaite was a large buyer of the shares behind a strong recommendation from Mr Brian Newman, head of the newly-installed electronics team at Hendersons.

Hendersons say the shares are undervalued on the basis that a stake in Ferranti's CT2 licence, acquired by Cable & Wireless when it took over Telephone Rentals, is being auctioned off and could well be bought by a big US group such as AT & T. The broker also says Ferranti could attract the predatory attention mentioned by Lord Weinstock, GEC's managing director, recently.

And, according to Mr Newman, winning the Eurofighter radar contract, which he says is increasingly likely, will increase the chances of a tie up with one of the top European or US electronics group.

Wellcome lost 11 to 472p amid some talk of troubles with Retrovir, the anti-Aids drug. A press report of a counterfeit version of the drug on sale in the Far East compounded recent brokers' dowgradings of the drug's sales forecasts. Retrovir's sales perfomance is difficult to predict, said analysts. Next year's sales forecasts for the drug vary from £150m to more than £200m.

ICI dropped 13 to 1181 in spite of modarate dollar strength, ahead of tomorrow's full year results, and Fisons ended 7 down at 282p on profit-taking.

General Accident were once again a casualty in a generally depressed insurance sector as widespread adverse comment on the NZI saga in the financial press triggered persistent selling to leave the shares down 27 at 958p; turnover was 1.6m.

Costain were the pick of the building and construction arena with the shares spurting a further 7 to 335p amid continuing speculation of possible predatory moves against the group. Trafalgar House currently has an 8.4 per cent stake in Costain and recent market chatter has suggested this could have been sold. But dealers said this was most unlikely. "They (Costain) are back in vogue and there is not a seller in the world at the moment. There is a stock shortage and the shares look cheap. Everyone is looking to buy them, we've been bid for size by just about everybody."

Yorkshire Chemicals jumped 21 to 316p after revealing preliminary figures well in excess of the most optimistic forecasts.

Retailers continued to attract buyers in the wake of some bullish comment from analysts at Citicorp Scrimgeour Vickers and Hoare Govett on Monday.

Talk of stakebuilding initially gave Dalgety a boost, but the shares slipped back to close 2 easier at 352p on turnover of 2.2m shares. One dealer said there was a good buyer of the stock on the inter dealer-broker screens at 352½p and 353p. Selected manufacturers staged a modest recovery in the face of the current foods scare.

Warburg Securities moved in early to buy Chamberlain Phipps stock on behalf of Bowater Industries, which launched a 220p-a-share bid for Chamberlain in the morning. Some 5.5m shares changed hands in the wake of the offer and after touching 220½p at one point the shares settled back to 218p, 19 higher on the day. About half the turnover went to Bowater, which shed 9 to 476p.

French investors were again reported to have bought Eurotunnel, which jumped a further 24 to 816p. Suter was marked up during the morning session and resisted the afternoon's general market weakness to close 8 higher at 207p. "It's not expensive on fundamentals and this is not speculative buying," said one dealer.

A profits downgrading of Pilkington from James Capel lopped 8 off the shares leaving them at 241p. Capel blamed "peripheral difficulties," such as slow demand for loft insulation in the warm winter. It cut the full year forecast to £820m, "having previously been at the high end of market expectations. The shares remain a strong hold," Capel added.

Stanley Leisure shares dropped to 250p before rallying well to close a net 7 off at 254p after the complicated deal with Brent Walker whereby the former will acquire five casinos from Brent Walker for some £25m, financed mostly via a £22m rights issue at 220p a share.

Mr Roy Owens, leisure analyst at Kitcat & Aitken, described the deal as "a good strategic move for Stanley in an industry where opportunites are very limited. They're an excellent investment with well above average growth prospects." Brent Walker jumped 10 to 347p.

Spice, the USM-listed distributor of motor parts and accessories, reacted after news of fund raising proposals. A £3m rights issue is planned and certain shareholders, including Mr Gordon Spice, the company's chairman, have renounced their rights entitlement which will be taken up by the partnership of Blake, Birchall and Fleming. Mr Richard Fleming will shortly join the board as managing director. The shares ended 7 down at 71p.

Selected Agencies began to appeal in front of trading announcements and on recommendations from broking houses. Citicorp Scrimgeour Vickers and BZW both favour Lowe Howard-Spinks, outstanding with a rise of 10 to 388p. "The strong organic growth expected in 1989 has been enhanced by good new business gains already this year," said the Citicorp duo of Ms Rebecca Munns and Mr Chris Akers. The company is due to report annual results on March 15.

WCRS, with interim figures due on March 8, showed response to advice that the "positive news flow should underpin further recovery in the share price," rising 5 to 253p. Michael Peters greeted more than doubled mid-term profits with a jump of 9 to 124p.

Investors hoping for Norton Opax to receive a bid from Bowater were dismayed by the latter's bid for Chamberlain Phipps. Following a meeting with Bowater, several analysts decided that the bid premium in the Norton price was too high and their subsequent "take profits" hints sent Norton shares 8 lower to 184p.

Reed International became uncertain when a seller went round the market, causing disquiet among marketmakers running long positions in the stock. Retail business was negligible and after mainly intra-market trade Reed shares closed 13 off at 432p. Pearson also lost ground to 701p, down 16, but Bristol Evening Post shot 23 higher to 368p

Courtaulds benefited as marketmakers were caught running short book positions. Their endeavours to square commitments induced considerable intra-market business and the share price ran quickly higher to close 9 up at 309p. Little customer business materialised, although several analysts have recently become more positive over the stock, including Mr Roy Barratt, sector researcher at Warburg Securities.

Shell were actively traded - 4.4m shares changed hands - as the stock see-sawed before closing a net 2 off at 375p. The company is scheduled to announce fourth quarter figures on March 2 with Hoare Govett forecasting net income, on an historic cost basis, of £770m. The market range is around £700m to £900m.

Dixons caught the eye in traded options dealings, on 3,370 contracts, divided between 1,850 calls and 1,520 puts, as a bunch of electrical stocks, such as Plessey, GEC and Racal also took prominent positions. Overall turnover came to 42,861 contracts, including 33,880 calls and 8,981 puts.

■ Other market statistics, including FT-Actuaries Share Index and London Traded Options, Page 29

FINANCIAL TIMES STOCK INDICES

	Feb. 21	Feb. 20	Feb. 17	Feb. 16	Feb. 15	Year Ago	1988/89 High	1988/89 Low	Since Compilation High	Since Compilation Low
Government Secs	88.78	88.04	88.08	89.15	88.90	89.62	91.43 (18/4/88)	88.15 (14/12/88)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Interest	96.48	96.53	96.55	97.60	97.85	96.04	96.67 (26/5/88)	94.14 (8/1/88)	105.4 (28/11/47)	50.53 (3/1/75)
Ordinary	1695.0	1696.9	1678.1	1667.2	1677.4	1410.3	1714.7 (8/2/89)	1349.0 (8/2/88)	1926.2 (16/7/87)	49.4 (26/6/40)
Gold Mines	158.7	157.2	154.7	159.4	155.6	262.0	312.6 (7/1/88)	154.7 (17/2/89)	734.7 (15/2/83)	43.5 (26/10/71)
Ord. Div. Yield	4.33	4.28	4.33	4.36	4.34	4.45				
Earning Yld % (full)	10.92	10.57	10.79	10.87	10.83	10.70				
P/E Ratio (Net)(*)	11.11	11.39	11.26	11.18	11.22	11.34				
SEAQ Bargains (5pm)	31,636	29,450	23,255	25,964	25,185	35,479				
Equity Turnover (£m)†	-	1067.97	1129.03	1491.67	1069.84	1293.51				
Equity Bargains†	-	32,031	26,481	28,113	28,858	27,872				
Shares Traded (ml)†	-	437.3	484.5	665.3	407.5	449.2				

Ordinary Share Index, Hourly changes

Opening	10 a.m.	11 a.m.	12 p.m.	1 p.m.	2 p.m.	3 p.m.	4 p.m.
1697.8	1704.1	1707.0	1707.8	1707.3	1707.3	1704.6	1701.2

DAY'S HIGH 1709.0 DAY'S LOW 1694.9

Basis 100 Govt. Secs 15/10/26, Fixed Int. 1928, Ordinary 1/7/35, Gold Mines 12/9/55, SE Activity 1974. *Nil 11.04 †Excluding intra-market business.

● S.E. ACTIVITY

Indices	Feb.20	Feb.17
Gilt Edged Bargains	99.5	92.0
Equity Bargains	207.5	171.6
Equity Value	2199.1	2282.1
5-Day average		
Gilt Edged Bargains	98.7	99.0
Equity Bargains	190.3	197.6
Equity Value	2509.1	2619.7

● London Report and latest Share Index: Tel. 0898 123001

TRADING VOLUME IN MAJOR STOCKS

The following is based on trading volume for Alpha securities dealt through the SEAQ system yesterday until 5 pm.

Stock	Volume 000's	Closing Price	Day's change	Stock	Volume 000's	Closing Price	Day's change	Stock	Volume 000's	Closing Price	Day's change	Stock	Volume 000's	Closing Price	Day's change
Boots	1,100	262	-2	GUS A	215	1128	+13	Pilkington	9,000	241	-8	Tate & Lyle	1,700	237	
British Airways	3,100	192	-2	GRE	1,100	215	-2	Plessey	1,300	257	+1	Tesco	1,700	161	-1½
Brit. Aerospace	913	522	-10	GKN	1,100	346		Polly Peck Intl.	1,200	334	-2	THORN EMI	907	720	-4
Brit & Comm.	657	233	-2	Guinness	3,500	414	+3	Prudential	2,800	170½	-1	Trafalgar House	1,500	352	-5
British Gas	2,500	173½	-1	Hammerson "A"	325	805	-1	Racal	4,000	351	+1	Trusthouse Forte	5,100	286	+1
British Land	549	348	-1	Hanson	4,980	179½	-1½	Rank Org.	147	910	-8	Ultramar	881	292	-6
BP	4,600	274		Harrisons & Cros.	425	723	-1	RMC	347	606	-4	Unilever	2,000	561	-3
British Steel	22,998	86¼	+¼	Hawker Siddeley	1,500	658	+9	RHM	447	381	-1	United Biscuits	2,200	329	
British Telecom	4,700	280	+1	Hillsdown Hldgs.	3,700	280	+6	Reckitt & Colman	971	1037	-6	Utd. Newspapers	132	465	-4
Burmah Oil	1,200	544	+9	IMI	312	231	+1	Redland	3,400	516	+2	Wellcome	1,336	472	-11
Burton	604	205	-3	Imp. Chem.	2,400	1181	-13	Reed International	1,400	432	-13	Whitbread "A"	1,000	340	-2
Cable & Wireless	1,400	430	+1	Inchcape	415	249	-2	Reuters "B"	359	646		Williams Hldgs.	1,100	273	-5
Cadbury Schweppes	1,600	361	+3	Jaguar	922	305	-1	RTZ	1,600	517	+1	Wimpey	1,300	290	
Coats Viyella	2,200	159	-2	Ladbroke	2,095	540	+7	Rolls-Royce	5,700	172	-1	Woolworth Hldgs	269	274	-2

NEW HIGHS AND LOWS FOR 1988/89

NEW HIGHS (185).
LOANS (1) N'wide Anglia 3⅞pc 2021, CANADIANS (5) Gt. Pac. Res., BANKS (3) Midland, Rothschild (J.), TSB Channel Islands, BREWERS (6) Bass, Guinness, Do. 5¼pc Cv Pf, Do. 5¼pc Cv Ln, Highland Dists., Macallan-Glenlivet, Marston Thompson, Wolv. & Dudley, BUILDINGS (20) CHEMICALS (6) Caird Grp., HPC Grp., MTM, Novo Inds. "B", Rechem Envtl. Servs., Yorkshire Chems., STORES (3) Aquascutum "A", Lloyds Chem 7.5pc Cm Pf, Wyevale Garden Centres, ELECTRICALS (15) ENGINEERING (8) FOODS (3) Clifford "A", Low (Wm.), Meat Trade, HOTELS (2) Queens Moat, Do. 7pc Cv, INDUSTRIALS (38) AAH, Alfa-Laval AB "B", Allied Part., BBA Grp., Do. 6.7pc Cm Rd Pf, Beecham, Burndene, Cathay Pacific, Dawsongroup, Doctus, Erskine Hse 7¼pc Pf, Eurotunnel, Do. Wrnts., Fenner (J.H.), Grampian Hldgs, Hawthorn Leslie, Hepworth, Jardine Strategic, Lilleshall, Marling Ind., Morgan Crucible, Rauma-Repola, Reuters "B", Scott Robertson, Siebe, Sthn. Business, Storngard, Unilever, INSURANCE (2) Steel Burrill J., Utd Friendly "B", LEISURE (9) MOTORS (4) Bostrom, Central Motor Auctions, Volvo, Western Motor, NEWSPAPERS (3) Barbour Index, Bristol Eve. Post, Independent, PAPERS (5) Aspen Comms., Colorgraphic, FKB Grp., Planning Resch. & Syst., Waco Grp., PROPERTY (8) SHIPPING (3) Clarkson (Horace), P & O Dfd., Do. 6.3pc Cv Pf, Tiphook, Turnbull Scott, TRUSTS (12) OILS (2) Barrack Energy, Monument Oil, MINES (2) De Beers Dfd., Sungei Besi.

NEW LOWS (10).
CANADIANS (1) Danbus Memory, INDUSTRIALS (3) De La Rue, Sharp & Law 8½pc Cv Pf, Tech Project Serv, INSURANCE (2) NZI Corp., Windsor, TEXTILES (1) Smallshaw (R.), MINES (3) Brunswick, Gwalia Mins., Metana Mins.

APPOINTMENTS

Senior post at Tilcon

■ Mr Robert Connolly (above) has been appointed to a senior executive post at TILCON from March 1 to head the special products division. He was deputy managing director of British Fuels. Mr Rupert C. Bishop, managing director, special products division, retires at the end of March.

■ REUTERS, the world news and information organisation, has appointed Mr Michael Reupke, editor-in-chief, as general manager from May 1. He is succeeded by Mr Mark Wood, now editor for Europe, the Middle East and Africa. Mr Michael Nelson, deputy managing director and general manager, retires at the end of April. Mr Wood is succeeded by Mr Graham Williams, now editor for France.

■ Mr Paul Burke has been promoted to group operations director, and Mrs Jane Nowill to retail sales director of TALKLAND, a Europa Communications company. Both are new posts.

■ EWART, Belfast, has opened a London office and appointed Mr Harry Black as chief executive of Ewart (Southern). He was an investment partner at Chesterton.

■ HALL & TAWSE GROUP, construction arm of Raine Industries, has appointed Sir Russell Fairgrieve as a non-executive director. Mr Gordon Malcolm has been appointed western area director. He was contracts manager with Mowlem (Midlands).

■ FULTON BOILER WORKS has appointed Mr Henry A. Bekhuys as vice president international marketing. He was with the Cissell Group.

■ TUBE PRODUCTS GROUP has appointed Mr Neil Lovatt-Smith as finance director. He was a senior manager with Peat Marwick McLintock in Birmingham.

■ LADBROKE GROUP has appointed Mr Harry Cooper as deputy group treasurer. He joins from Air Products.

■ CLUB CAR, mobile hospitality specialist, has appointed Mr Mike Lehr as managing director. He remains group commercial director with parent company Tudor Photographic. Mr Raymond Stiles becomes Club Car sales and marketing director, and Mr Pat Gallagher production director.

■ THE JOHN E. WILTSHIER GROUP has appointed Mr Charles Streeting as estimating director of the South Midland's division. He was chief estimator.

■ Mr Alex Davie has been appointed technical director of BOCM SILCOCK, Basingstoke. He was managing director of Lever Brothers, Ghana, and deputy chairman of UAC of Ghana. Mr Davie succeeds Mr Iain Ferguson who has become chairman of PBI Cambridge.

US Ambassador joins Hanson

■ Mr Charles H Price, United States ambassador in London since 1983, has accepted an invitation to become a non-executive director of HANSON from March 1, when he leaves US Government service. Mr Price will also be joining the executive officer group of Amerihanc. He will be nominated to succeed Mr William F Knight, Jr., as chairman of the board. He has also been elected a director of Texaco Inc.

■ Mr John Finan, chief executive of the NEL Britannia Group, has been elected chairman of NEL PERMANENT HEALTH INSURANCES. Mr Tom Wall, managing director, Mr Robert Stedall, finance and administration director, and Mr Graham Hockings, deputy actuary, have also been appointed to the NELPHI board.

■ Mr Brian Hanley has been appointed general manager, Europe, by CONCURRENT COMPUTER CORPORATION, Slough, a subsidiary of the US corporation based in New Jersey. He was managing director UK.

BUDGET RENT A CAR, Hemel Hempstead, has promoted Mr Peter Crouch (above) to president, international group. He was executive vice president Europe, Middle East and Africa.

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Prudential Holborn Unit Tsts Ltd (1445)H
51-69 Ilford Hill, Ilford, Essex IG1 2DL 01-478 3377
Holborn Lifeline 0800 010345
Two Hourly Pricing

Smith & Williamson Unit Tst Mgrs (1000)F
1 Riding House St, London W1A 3AS 01-637 5377

	Init Chrge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
S & W American	5	136.4	140.1	149.2	.....	1.93
S & W Growth	5	88.63	89.30xd	95.09	.....	2.27
S & W Income	5	46.85	98.98	104.2	.....	5.22
S & W Smllr Secs	5	239.8	247.8	262.2	.....	1.27

Provident Mutual Unit Tst Mgrs Ltd (0905)H
25-31 Moorgate, London, EC2R 6BA. 01-588 3903

	Init Chrge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
PM Equity Gth	5	116.4	118.7	126.2	+0.8	2.83
PM Income & Gth	5	104.7	106.6	113.3	+0.9	4.22
PM Nth Amer Gth	5	47.34	47.34	50.36	+0.03	1.50
PM European Gth	5	46.55	46.55	49.52	+0.57	0.90
PM Japan Gth	5	80.00	80.16	85.27	-0.32	0.29
PM Overseas Gth	5	49.97	49.97	53.15	+0.13	0.89

GUIDE TO UNIT TRUST PRICING

INITIAL CHARGES
These represent the marketing, administrative and other costs which have to be paid by new purchasers. These charges are included in the price when the customer buys units.

OFFER PRICE
The price at which units may be bought.

BID PRICE
The price at which units may be sold.

CANCELLATION PRICE
The maximum spread between the offer and bid prices is determined by a formula laid down by the government. In practice, unit trust managers quote a much narrower spread. As a result, the bid price is often set well above the minimum permissible price which is called the cancellation price in the table. However the bid price might be moved to the cancellation price in circumstances in which there is a large excess of sellers of units over buyers.

TIME
The time shown alongside the fund manager's name is the time at which the unit trusts' daily dealing prices are normally set unless another time is indicated by the symbol alongside the individual unit trust name. The symbols are as follows: ♥ - 0001 to 1100 hours; ♦ - 1101 to 1400 hours; ♠ - 1401 to 1700 hours; ♣ - 1701 to midnight.

HISTORIC PRICING
The letter H denotes that the managers will deal on a historic price basis. This means that investors can obtain a firm quotation at the time of dealing. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis.

FORWARD PRICING
The letter F denotes that prices are set on a forward basis so that investors can be given no definite price in advance of the purchase or sale being carried out. The prices appearing in the newspaper show the prices at which deals were carried out yesterday.
Other explanatory notes contained in last column of the FT Unit Trust Information pages.

FT UNIT TRUST INFORMATION SERVICE

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	Init Charge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
Windsor Trust Mngrs Ltd (1200)F						
83 Kingsway, London, WC2B 6SD 01-405 8331						
Contbl & Equity	5	63.69	66.26	70.46	+0.38	3.77
European	5	57.05	57.61	61.29	[illegible]	0.41
Far Eastern	5	54.57	54.58	59.06	-0.14	1.18
Growth	5	88.36	91.71	97.56	-0.33	2.46
Income	5	82.27	84.16	89.53	[illegible]	3.72
Property Share	5	54.35	55.35	58.92	-	1.25
Smaller Co's	5	59.32	62.02	65.97	+0.26	1.61
Formerly RBC Trust Managers Ltd						
Windsor Sel Gth Acc ♦	5	63.97	63.97	68.42	+0.20	1.91
Windsor Select Inc ♦	5	68.37	68.37	73.12	[illegible]	3.41
Windsor Sel Inc Acc ♦	5	73.30	73.30	78.47	[illegible]	3.41
Windsor Nth Amer ♦	5	52.10	52.10	55.72	-0.21	1.85
Windsor Intl ♦	5	40.88	40.88	43.72	[illegible]	1.47
Wright Seligman Fund Mngrs Ltd (1000)H						
11 Blomfield St, London EC2M 7AY 01-588 0592						
Growth	5	94.26	94.26	98.26	[illegible]	[illegible]
Weekly dealing day Tuesday						
The Yorkshire Unit Tst Mngrs Ltd (1100)F						
Woodsome Pk, Fenay Bdge, Huddersfield 0484 602250						
Yorkshire General	5¼	61.22	63.45	67.48	[illegible]	3.09
YUTM UK Eqty Inc Tst	5¼	60.04	62.02	65.98	[illegible]	4.50
YUTM Intl Gwth Tst ♦	5¼	46.16	46.16	49.21	+0.16	1.12

OTHER UK UNIT TRUSTS

Baillie Gifford & Co Ltd

Int'l Exps Feb 15 ... 420.0 ... 445.3

Cent. Bd. of Fin. of Church of England‡‡

2 Fore Street, London EC2Y 5AQ 01-588 1815

Inv Fund Jan 31	492.38		4.71
Fxd Int Sec Jan 31	148.75		9.55
Deposit Jan 31	100.00		12.45

Charities Official Invest. Fund‡‡

2 Fore Street, London EC2Y 5AQ 01-588 1815

Income Jan 31	464.82		4.97
Accum Jan 31	1500.47		

Edinburgh Fund Mngrs PLC

Allied Dunbar Assurance Plc

Allied Dunbar Ctr, Swindon SN1 1EL 0793 514514

City of Edinburgh Life Assurance

City of Westminster Assurance Co

Clerical Medical/Fidelity International

Clerical Medical Investments Group

Clerical Medical Managed Funds Ltd

Colonial Mutual Group

Combined Insurance Co of America

Commercial Union Group

Cornhill Insurance PLC

Crown Financial Management Ltd

Crusader Insurance Plc

Eagle Star Insurance Group Ltd

Eagle Star Insur/Midland Assur.

Economic Insurance Company Ltd

Edinburgh Money Management Ltd

Equitable Life Assurance Society

Equity & Law

FS Assurance Limited

Family Assurance Society

Framlington Life Assurance Ltd

Friends' Provident

GT Management Ltd

General Accident Linked Life Assur(z)

General Portfolio Life Insce Plc

Assicurazioni GENERALI SpA

Gresham Unit Assurance Ltd

Growth & Sec. Life Assce. Soc. Ltd

Guardian Royal Exchange

Hearts of Oak Insurance Group

Henderson Administration(z)

Hill Samuel Life Assur. Ltd (z)

Homeowners Friendly Society

Ideal Insurance Co Ltd

Imperial Life Assurance Co Ltd

Irish Life Assurance Co Plc

The LAS Group

Lancashire & Yorkshire Assce Society

Laurentian Life plc

Legal & General (Unit Assur) Ltd

Legal & General (Unit Pensions) Ltd

Liberty Life Assurance Co Ltd

London A'dara & Nthn. Mtl. Assur. Ltd

London Indemnity & Gnl. Ins. Co Ltd

London Life

London & Manchester Group

M & G Life and M & G Pensions

MIM Assurance

Manufacturers Life Insurance Co (UK)

Merchant Investors Assurance Co Ltd

Midland Life Limited

Municipal Life Assurance Ltd

NEL Britannia Assce Co Ltd

NEL Pensions Ltd

NM Schroder Life Assurance Ltd

National Financial Management Corp PLC

National Mutual Life

National Provident Institution

Norwich Union Asset Management Ltd

Norwich Union Life Insurance Soc.

Pearl Assurance (Unit Funds) Ltd

Phoenix Assurance Co Ltd

INSURANCES

AA Friendly Society

Abbey Life Assurance Co Ltd

Abtrust Management Ltd

AEtna Life Insurance Co Ltd

Albany Life Assurance Co Ltd

Avon Insurance Plc

Barclays Life Assur. Co Ltd

Black Horse Life Ass. Co Ltd

CCL Assurance Ltd

Canada Life Group

Cannon Assurance Ltd

Chicory British National

Continued on next page

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Pioneer Mutual Insurance Co Ltd

16 Crosby Rd. N. Waterloo, Liverpool 051-928 6655

	Bid Price	Offer Price	+ or -	Yield Gross
Managed Fund	283.3	298.3	----	-
Man Pens Inc & Cap Fds	368.8	387.4	----	-
Money Fund	117.1	123.3	----	-
Pens Mngd Fd (Init)	99.4	104.7	----	-
Pens Mngd Fd (Acc)	118.2	124.5	----	-
Pens FT30 Fd (Init)	140.9	148.4	----	-
Pens FT30 Fd (Acc)	167.5	176.4	----	-
Pens O'seas MgFd(Init)	70.0	73.7	----	-
Pens O'seas MgFd(Acc)	83.3	87.7	----	-
Pens Fxd Int Fd (Init)	106.0	111.6	----	-
Pens Fxd Int Fd (Acc)	126.1	132.8	----	-
Pens Deposit Fd (Init)	103.3	108.0	----	-
Pens Deposit Fd (Acc)	122.8	129.3	----	-

Premium Life Assurance Co Ltd

37-39, Perrymount Road, Haywards Heath 0444 458721

	Bid Price	Offer Price	+ or -	Yield Gross
American	108.0	114.0	+1.0	-
Building Soc. Fd	168.0	177.0	----	-
Balanced	271.0	286.0	+1.0	-
Deposit	166.0	175.0	----	-
European	149.0	157.0	----	-
GT Managed	173.0	183.0	----	-
Gartmore Mngd	112.0	118.0	----	-
German	103.0	109.0	-1.0	-
Gilt	175.0	185.0	----	-
Global	48.0	51.0	----	-
High Inc	115.0	122.0	----	-
International Equity	177.0	187.0	----	-
Japan	237.0	250.0	----	-
Managed	62.0	66.0	+1.0	-
Property	276.0	291.0	----	-
R. W. Imperial Gold	129.0	136.0	----	-
UK Equity	368.0	388.0	+3.0	-

Prudential Holborn Pensions Ltd

30 Old Burlington St, London W1X 1LB 01-439 3134

	Bid Price	Offer Price	+ or -	Yield Gross
Managed	534.0	562.2	+1.8	-
Equity	776.6	817.5	+4.4	-
Global Equity	215.9	227.3	-0.3	-
Fixed Interest	401.7	422.9	-1.2	-
Property	373.5	393.2	(z)	-
Cash	150.7	158.7	(z)	-
Index Linked Gilt	194.1	204.4	-0.2	-
Guaranteed	11.93		+0.06	-
International Money	192.9	203.1	+1.0	-
North American	58.9	62.0	-0.7	-
Japanese	136.9	144.2	+0.9	-
European	78.8	83.0	-0.2	-
Special Situations	116.4	122.6	+0.4	-
Communications	91.5	96.4	-0.3	-
Smaller Companies	106.7	112.4	+0.4	-
International Small Co	115.9	122.0	-0.2	-

Prudential Pensions Limited

Holborn Bars, London EC1N 2NH 01-405 9222

	Bid Price	Offer Price	+ or -	Yield Gross
Discretionary Feb 16	£145.23	150.17	----	-
Equity Feb 16	£159.19	165.04	----	-
International Feb 16	£23.42	24.13	----	-
Intl Bond Feb 16	£11.04	11.18	----	-
Fixed Int Feb 16	£71.82	72.77	----	-
Index Linked Feb 16	£59.12	59.86	----	-
Property Feb 16	£102.89	109.10	----	-
Cash Feb 16	£20.0762	20.0762	----	-
Pru-Linked Retirement Plan				
Managed Feb 15	358.6	373.6	----	-
Cash Feb 15	189.1	197.0	----	-

Touche Remnant (Guernsey) Limited

PO Box 208, St. Peter Port, Guernsey 0481 26268

CMI Insurance Co Ltd

Clerical Medical Hse, Douglas I.O.M. 0624 25899

For other Unit Prices phone 0624 25899

JERSEY AUTHORISED

MANAGEMENT SERVICES

OFFSHORE AND OVERSEAS

GUERNSEY AUTHORISED

IoM AUTHORISED

LUXEMBOURG AUTH'D

OTHER OFFSHORE FUNDS

BERMUDA AUTHORISED

OFFSHORE INSURANCES

FT UNIT TRUST INFORMATION SERVICE

LONDON SHARE SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

1988/89 High	Low	Stock	Price £	+ or –	Yield Int.	Red.
101	98	Treas 9½pc Cnv 1989	99	+	[illegible]	11.94
98	95	Treas 3pc 1989	98	......	[illegible]	9.23
102	98	Treas 10½pc 1989	99	+	[illegible]	12.41
102	98	Exch.10pc 1989	99	+	[illegible]	12.43
103	98	Exch 11pc 1989	99¼xd	+	[illegible]	12.40
97	94	Treas 5pc 1986-89	96	+	[illegible]	10.07
104	98	Exch 10¼pcCv '89	99½	......	[illegible]	10.94
107½	101	Treas 13pc 1990‡‡	101	–	[illegible]	11.53
104	99	Exch 11pc 1990‡‡	99	–	[illegible]	11.49
107	100	Exch. 12½pc 1990	100	–	[illegible]	11.55
93	90	Treas. 3pc 1990	92	+	[illegible]	11.08
99	95	Treas 8¼pc 1987-90‡‡	96	–	[illegible]	11.08
102	95	Treas. 8pc Cv 1990 ‡‡	98	–	[illegible]	9.38
103	97¼	Treas. 10pcCv 1990	98	–	10.19	11.24
91	87	Exch 2½pc 1990	90	+	2.78	9.00
107	100	Treas 11¾pc 1991	101	–	11.63	11.09
95	89	Funding 5¾pc '87-91‡‡	91	+	6.27	10.22
90	86	Treas. 3pc 1991	88	......	3.39	8.89
105	97	Treas 10pc Cv '91 ‡‡	99	–	10.04	10.22
107	98	Exch. 11pc 1991	100	–	10.96	10.82
98	91	Treas. 8pc 1991	93	–	8.57	10.79
113	103	Treas 12¾pc 1992‡‡	105	–	12.10	10.54
104	96	Treas 10pc 1992	98	–	10.16	10.62
98	91¼	Treas. 8pc 1992 ‡‡	93	–	8.59	10.62
106	98	Treas 10½pc Cv 1992‡‡	99	–	10.53	10.59
86	81	Treas. 3pc 1992	[illegible]	[illegible]	3.53	8.33
112	102	Exch. 12¼pc '92	104	–	[illegible]	10.60
117	106	Exch 13½pc 1992	108	–	[illegible]	10.33
97	91	Treas 8¾pc 1993	[illegible]	–	[illegible]	10.43
105	96	Treas 10pc 1993‡‡	98	–	[illegible]	10.32
115	105	Treas 12½pc 1993‡‡	107	–	[illegible]	10.35

BRITISH FUNDS—Contd

Undated

1988/89 High	Low	Stock	Price £	+ or –	Yield Int.	Red.
45⅛	41	Consols 4pc	45	–⅛	8.89	–
40	37	War Loan 3½pc‡‡	40	–⅛	8.75	–
70	48	Conv. 3½pc '61 Aft	69½	......	5.04	–
39	30	Treas. 3pc '66 Aft	38	–½	7.89	–
28	26⅛	Consols 2½pc	28	–⅛	8.71	–
29	26⅛	Treas. 2½pc	28⅝	–⅛	8.73	–

Index-Linked

1988/89 High	Low	Stock (b)	Price £	+ or –	(1)	(2)
126½	117½	Treas 2pc IL '90(84.6)	126½	......	–	2.91
106	99	Do. 2pc '92‡‡(97.8)	105	–	2.45	3.37
98	92½	Do. 2 '94 (102.9)	98	–	2.84	3.38
144½	127½	Do. 2pc '96(67.9)	144xd	–	3.03	3.41
123	103	Do 2½pc '01(78.3)	123xd	–	3.27	3.53
121	101	Do. 2½pc '03(78.8)	121	–	3.31	3.54
124½	102½	Do. 2pc '06(69.3)	123	–	3.37	3.56
116	95	Do. 2½pc '09(78.8)	116	–	3.38	3.55
121	99	Do. 2½pc '11(74.6)	121xd	–	3.38	3.54
101	82	Do. 2½pc '13(89.2)	101	–	3.35	3.50
109	88	Do. 2½pc '16(81.6)	109	–	3.33	3.48
107	87¼	Do. 2½pc '20(83.0)	107	–	3.29	3.42
90	73	Do. 2½pc '24‡‡(97.7)	90⅛	–	3.27	3.39

Prospective real redemption rate on projected inflation of (1) 10% and (2) 5%. (b) Figures in parentheses show RPI base month for indexing, (ie 8 months prior to issue) and have been adjusted to reflect rebasing of RPI to 100 in January 1987. Conversion factor 3.945. RPI for June 1988:106.6 and for January 1989:111.0

INT. BANK AND O'SEAS

CORPORATION LOANS

COMMONWEALTH & AFRICAN LOANS

LOANS

Building Societies

Public Board and Ind.

FOREIGN BONDS & RAILS

AMERICANS

Continued on next page

World Fund S.A.
World Fund NAV Feb 16 $22.11

World Natural Resources
NAV Feb 11 $10.21

Worldinvest (Managers) Jersey Ltd
Worldinvest Inc. $229.54 230.70 7.61
Valued weekly on Wednesdays

Yamaichi Capital Mangmt (Guernsey) Ltd

Japan Mega Growth	$13.95	–0.24	–
Yamaichi OSI Fund	$14.16	–0.01	–
Yamaichi ISS Fund	$11.49	–0.22	–
Yamaichi CB Plus Fund	$10.22	–0.15	–
Thai Inv Fund	$9.01	......	–

Yamaichi Dynamic Mngt Co SA

Advanced Tech	$25.88	......	–
Dynamic Grth Fd	$21.69	......	–

Money Market Trust Funds

	Gross	Net	Gr Equiv CAR	Int Cr
Charities Aid Fndtn Money Mngmt Co Ltd				
Staple Hall, Stone Ct, Houndsditch, EC3 01-283 6461				
CAFCASH Call Fund	12.40	9.52	11.11	3-mth
CAFCASH 7-day Fund	12.32	9.45	13.06	3-mth
The Charities Deposit Fund				
2 Fore Street, London EC2Y 5AQ 01-588 1815				
Deposit	12.60	–	13.21	3-Mth
Gartmore Money Management Ltd				
2-3 White Hart Yard, London SE1R 1NX 01-236 1425				
Call Fnd	12.40	9.52	13.00	6-Mth
7-day Fund	12.73	9.77	13.35	6-Mth
Dollar	8.12	6.23	8.51	3-Mth

Money Market Bank Accounts

	Gross	Net	Gr Equiv CAR	Int Cr
AAB–Allied Arab Bank Ltd				
97-101 Cannon St, London, EC4N 5AD 01-629 6802				
OMNA (£2,001+)	13.10	10.05	14.04	Mnth
HICA (£2,001+)	12.50	9.59	13.37	Mth
41 Lothbury, London, EC2P 2BP 01-374 3374				
£10,000 and above	11.75	9.00	12.41	Qtr
£2,000 to £9,999	11.25	8.50	11.59	Qtr
£1,000–£1,999	10.75	8.25	11.36	Qtr
£500–£999	10.50	8.00	10.99	Qtr
Provincial Bank PLC				
30 Ashley Rd, Altrincham, Cheshire 061-928 9011				
H.I.C.A. (£1,000+)	12.50	9.60	13.34	Mth
Royal Bank of Scotland plc Premium Acc				
42 St Andrew Sq, Edinburgh EH2 2YE 031-557 0201				
£50,000+	12.05	9.21	12.71	Qtr
£25,000–£49,999	11.80	9.05	12.49	Qtr
£10,000–£24,999	11.60	8.90	12.27	Qtr
£2,500–£9,999	11.25	8.63	11.89	Qtr
Savs & Prosper/Robert Fleming				
28 Western Rd, Romford RM1 3LB 0708 766966				
H.I.C.A.	11.40	8.75	12.19	Daily
Tyndall & Co Ltd				
29-33 Princess Victoria St, Bristol 0272 732241				
Demand Acc	12.12	9.30	12.84	Qtr
Money Acc	12.05	9.25	12.76	Qtr
Client Plus Acc	11.62	8.92	12.29	Qtr
J. Henry Schroder Wagg & Co Ltd				
Enterprise House, Portsmouth 0705 827733				
Special Acc	11.75	9.02	12.53	Mthly
£10,000 and above	12.00	9.21	12.05	Mthly
Western Trust High Interest Cheque Acc				
The Moneycentre, Plymouth PL1 1SE 0752 224141				
£1,000–£4,999	12.00	9.21	12.70	Qtr
£5,000–£9,999	12.25	9.40	12.97	Qtr
£10,000–£49,999	12.50	9.59	11.25	Qtr
£50,000+	12.75	9.78	11.53	Qtr
Wimbledon & South West Finance Co Ltd				
114 Newgate St, London EC1 7AE 01-606 9485				
High Int Cheque Acc	12.50	9.59	13.25	Qtr.

NOTES—Gross rate in these exempt from composite rate of tax Net actual rate after deduction of CRT Gr Equiv CAR: Gross equivalent to basic rate taxpayers–compounded annual rate Int Cr frequency interest credited

UNIT TRUST NOTES

Prices are in pence unless otherwise indicated and those designated $ with no prefix refer to U.S. dollars. Yields % allow for all buying expenses. Prices of certain older insurance linked plans subject to capital gains tax on sales. h Distribution free of UK taxes. p Periodic premium insurance plans. s Single premium insurance. n Offered price includes all expenses except agent's commission. z Previous day's price. ¶¶ Guernsey gross. a Suspended. ♦ Yield before Jersey tax. † Ex-subdivision. ‡‡ Only available to charitable bodies. ♦ Yield column shows annualised rates of NAV increase. all ex dividend.

LONDON SHARE SERVICE

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CANADIANS

1988/89 High	Low	Stock	Price £	+ or −	Div Gross	C'vr	Y'ld Gr's
309p	132p	♥ABM Gold Corp ‖	144p	+1	—	—	—
32p	4½p	♥Abbot Energy Corp.	11½p	+¼	—	—	—
14¼	882p	♥Amer. Barrick Res.	11½	.....	—	—	—
10p	2⅛p	♥Amer. Lightwave ‖	2⅛p	.....	—	—	—
47p	7¼p	♥Armeno	14½p	−2½	—	—	—
125p	83p	♥Asiamerica ‖	108p	.....	—	—	—
76p	21p	♥Augmitto Explo.	20½p	−1	—	—	—
14⅗	10⅝	Bk. Montreal ‖	11⅞	−⅛	$2.12	—	7.3
769p	524p	Bk. Nova Scot. ‖	781p	−7	84c	—	5.8
18¼	15¼	BCE ‖	18¼	+⅛	$2.44	—	6.4
716p	527p	♥Bow Valley ‖	677p	+11	♦40c	—	2.8
14¼	10½	♥Brascan ‖	13⅛	.....	88c	—	3.2
328p	177p	♥Breakwater Res	199p	+1	10c	—	2.4
13¼	801p	Can. Imp Bank ‖	12⅛	.....	$1.16	—	4.6
12¼	841p	Can. Pacific ‖	10⅞	.....	76c	—	3.3
41½	38½	Do. 4pc Deb £100	38½	.....	4%	—	10.4
515p	357p	Central Capital "A" ‖	395p	+8	—	—	—
485p	313p	♥Corona Corp	425p	+9	—	—	—
886p	228p	♥Cons TVX Min.	330p	−9	—	—	—
371p	21½p	♥Danbus Mem. Syst. ‖	21½p	−1	—	—	—
686p	430p	♥Derlan Inds. ‖	599p	+4	11.75c	—	0.9
14⅛	746p	♥Echo Bay Mines	857p	+12	$0.07	—	0.4
839p	249p	♥ECO Corp ‖	455p	+15	—	—	—
40p	11¼	♥Energex Minerals ‖	12½p	+⅛	—	—	—
		For Euro-Asia see Asiamerica					
386p	196p	♥Galactic Resources	211p	+2	—	—	—
423p	267p	Gandalf Techs. Inc.	279p	.....	—	—	—
125p	41p	♥Geodome Res.	45½p	+½	—	—	—
394p	141p	Granges Expln ‖	151p	−1	—	—	—
23p	4½p	♥Gt. Pacific Res.	23p	+1½	—	—	—
903p	576p	♥Gulf Canada ‖	689p	+11	52c	—	3.6
12⅛	816p	♥Hawker Sid Can ‖	11⅞	.....	$1.08	—	4.4
590p	344p	♥Henlys Group	348p	−8	—	—	—
12½	785p	♥Hudson's Bay ‖	11⅞	+⅛	60c	—	2.4
28¼	20¼	♥Imperial Oil ‖	21⅛	−⅛	$1.80	—	3.7
20⅞	10⅛	Inco ‖	17⅛	.....	US$0.80	—	2.6
718p	462p	♥Inland Nat. Gas $1.	623p	−2	60c	—	4.6
250p	100p	♥Madeleine Mines	137p	−1	—	—	—
207p	136p	♥Muscocho Expln	165p	−1	—	—	—
187p	41½p	♥Ntnl Business Syst. ‖	41½p	+½	—	—	—
245p	85½p	♥Nevada Goldfields	91p	+5½	—	—	—
12⅗	787p	♥Rio Algom	11⅛	−⅛	$1.30	—	5.5
19½	11⅛	Royal Bk. Can. ‖	10⅛	.....	$2.20	—	5.8
40⅞	26⅛	Seagram ‖	38¼	+¼	US$1.20	—	1.7
361p	74½p	♥Sonora Gold Corp ‖	89p	+1	—	—	—
121p	18p	♥Spiral Eng ‖	77p	+3	—	—	—
150p	35p	♥Tam Pure Tech. Corp ‖	105p	.....	—	—	—
19¼	11⅛	Toronto-Dom. Bk. ‖	17⅛	.....	$1.12	—	3.0
746p	566p	♥Trans Can Pipe.	725p	+11	68c	—	4.5
205p	127p	♥Varity Corp ‖	170p	+3	B−	—	—

BANKS, HP & LEASING

1988/89 High	Low	Stock	Price	+ or −	Div Net	C'vr	Y'ld Gr's	P/E
*278	124	ANZ SA1	244	+1	034½c	2.0	6.8	7.1
*275	180	Allied Irish	275	+1	†072%	3.1	5.5	9.3
£13¼	£10⅛	Algemene Fl.10	£11⅞	.....	027%	1.9	6.7	—
73	58	Anglo Irish	70	.....	0169%	1.2	6.5	19.9
90	64	Ansbacher (H.) 10p	78	.....	2.0	—	3.4	—
£54⅛	£30⅞	B'caire Gle Fr100	£49⅞	.....	010%	—	1.9	—
£40½	£24⅝	Banco Bilbao Viz.	£39¼	+⅛	057%	♦	3.1	♦
£36	£27⅛	Banco de Santander	£29⅛	−⅛	021%	2.4	2.6	15.8
[illegible]								

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING, TIMBER, ROADS

[illegible]

BUILDING, TIMBER, ROADS — Contd

[illegible]

CHEMICALS, PLASTICS

[illegible]

DRAPERY AND STORES

[illegible]

For Woolton's B'ware see Betterware Cons.

ELECTRICALS

[illegible]

ENGINEERING

[illegible]

ENGINEERING—Contd

[illegible]

FOOD, GROCERIES, ETC

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS (Miscel.)—Contd

[illegible]

INDUSTRIALS (Miscel.)—Contd.

[illegible]

INSURANCES

[illegible]

LEISURE

[illegible]

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LEISURE—Contd

MOTORS, AIRCRAFT TRADES

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING, ADVERTISING

PROPERTY

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TEXTILES—Contd

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

TRUSTS, FINANCE, LAND—Contd

Finance, Land, etc

OIL AND GAS

OIL AND GAS—Contd

OVERSEAS TRADERS

PLANTATIONS

Rubbers, Palm Oil

Teas

MINES

Central Rand

Eastern Rand

Far West Rand

O.F.S.

Diamond and Platinum

Central African

Finance

Australians

MINES—Contd

Tins

Miscellaneous

THIRD MARKET

NOTES

Stock Exchange dealing classifications are indicated to the right of security names: α Alpha, β Beta, γ Gamma.

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 25 per cent and allow for value of declared distribution and rights.

- ● "Tap Stock"
- * Highs and lows marked thus have been adjusted to allow for rights issues for cash
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ‡‡ Tax-free to non-residents on application
- ♦ Figures or report awaited
- ♥ Not officially UK listed; dealings permitted under rule 535(4)(a)
- ☆ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Not officially listed.
- # Price at time of suspension
- ¶ Indicated dividend after pending scrip and/or rights issue; cover relates to previous dividend or forecast.
- ♦ Merger bid or reorganisation in progress
- ♣ Not comparable
- ♠ Same interim; reduced final and/or reduced earnings indicated
- § Forecast dividend; cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ★ Cover does not allow for shares which may also rank for dividend at a future date. No P/E usually provided.
- ‖ No par value

B.Fr. Belgian Francs. Fr. French Francs §§ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Annualised dividend. b Figures based on prospectus or other offer estimate. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast, or estimated annualised dividend rate, cover based on previous year's earnings. v Subject to local tax. x Dividend cover in excess of 100 times. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1988-89. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1989. K Dividend and yield based on prospectus or other official estimates for 1987-88. L Estimated annualised dividend, cover and P/E based on latest annual earnings. M Dividend and yield based on prospectus or other official estimates for 1988. N Dividend and yield based on prospectus or other official estimates for 1989-90. P Figures based on prospectus or other official estimates for 1987. S Gross. R Forecast annualised dividend, cover and p/e based on prospectus or other official estimates. T Figures assumed. W Pro forma figures. Z Dividend total to date. Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency.

Albany Inv 20p.... y	80	......
Craig & Rose £1.. y	710	......
Finlay Pkg. 5p.... y	93	......
Holt (Jos) 25p..... y	1235	......
Arnotts...............	425	......
Carrol (P.J.)....... y	157	......
Hall (R. & H.).......	173	......
Helton Hldgs....... y	70xd	......
Irish Ropes...........	185	......

IRISH

Cap. 8½% Ln. 1991...	£99¾	......
9pc Cap Ln. 1996..	£100	......
Fin. 13% 97/02...	£121	......

TRADITIONAL OPTIONS

3-month call rates

Industrials

	p
Allied-Lyons	40
Amstrad	15
BAT	48
BOC Grp.	36
BSR	7½
BTR	26
Barclays	34
Beecham	40
Blue Circle	39
Boots	20
Bowaters	38
Brit Aerospace	42
Brit. Telecom	21
Burton Ord.	18
Cadburys	31
Charter Cons.	45
Comm Union	28
Courtaulds	26
FKI Babcock	15
FNFC	21
Gen Accident	71
GEC	15
Glaxo	90
Grand Met	38
GUS 'A'	90
Guardian	14
GKN	28
Hanson	12
Hawker Sidd	48
ICI	85
Jaguar	22
Ladbroke	38
Legal & Gen	[illegible]
Lex Service	[illegible]
Lloyds Bank	[illegible]
Lucas Inds	[illegible]
Marks & Spencer	[illegible]
Midland Bk	[illegible]
Morgan Grenfell	[illegible]
NEI	12
Nat West Bk	45
P & O Dfd	48
Plessey	15
Polly Peck	28
Racal Elect	25
RHM	32
Rank Org Ord	63
Reed Intnl	38
STC	24
Sears	15
TI	32
TSB	9
Tesco	12
Thorn EMI	55
Trust Houses	24
T&N	16
Unilever	42
Vickers	15
Wellcome	42

Property

Brit Land	30
Land Securities	52
MEPC	50

Oils

Brit Petroleum	21
Do. (P.Paid)	12
Burmah Oil	48
Calor	35
Charterhall	2½
Premier	9
Shell	85
Ultramar	31

Mines

Cons Gold	[illegible]
Lonrho	[illegible]
RTZ	[illegible]

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CURRENCIES, MONEY AND CAPITAL MARKETS

FOREIGN EXCHANGES

Loss of confidence hits pound

STERLING BROKE through a key support level of DM3.2450 in currency markets yesterday and fell sharply to around DM3.2300 in the afternoon. A recent reduction in favourable interest rate differentials and concern about the rise in UK inflation has prompted many investors to switch out of sterling.

European and US interest rates have been moving higher just recently. Since the beginning of the year, the advantage enjoyed by Euro-sterling rates over Euro-Dmarks has narrowed to 6⅞ per cent from 7⅞ per cent. Over the same period the differential against Euro-dollars has come down to 3¼ per cent from 3⅞ per cent.

On this basis, investors are finding it less expensive to run short on sterling, and the recent poor performance of other high yielding currencies, such as the Australian dollar, has encouraged traders to take a fresh look at the attractions of sterling as a medium term investment.

Recent data suggesting a slowdown in UK consumer spending and economic growth are regarded as favourable by-products of measures taken to tackle the main issue, namely inflation. But so far, the latter has shown no sign of reversing its upward trend, and this has undermined investor confidence in sterling.

The pound opened at DM3.2525 against the D-Mark, and edged up to around DM3.2550 at lunchtime. However, reports of several large selling orders pushed the pound sharply weaker to close at the day's low of DM3.2250, down from DM3.2500 on Monday.

Against the dollar, it fell to $1.7505 from $1.7635 and Y221.75 compared with Y223.00. Elsewhere, it finished at SFr2.7450 from SFr2.7625 and FFr10.9850 from FFr11.0750. On Bank of England figures, the pound's exchange rate index fell to 96.9, its lowest level this year, and down from 97.5 at the start and 97.7 on Monday.

The dollar lost ground against the D-Mark but was mostly firmer elsewhere. Sentiment was undermined by comments made to Congress by Mr Alan Greenspan, chairman of the US Federal Reserve Board. Speaking at the Humphrey Hawkins testimony, Mr Greenspan said that the Fed is more inclined to lean towards restraint rather than stimulus in the conduct of monetary policy. He added that the current rate of inflation is unacceptable and that capacity constraints highlight the dangers of upward pressure on prices.

However, much of the emphasis placed on fighting inflation has already been discounted by the market, and the dollar's improvement was relatively modest. Against the yen it rose to Y126.75 from Y126.45 and was higher in Swiss franc terms at SFr1.5685 from SFr1.5670. Elsewhere it slipped to FFr6.2750 from FFr6.2800. Its fall against the D-Mark was a result of the heavy switch out of sterling and into the West German unit. Against the latter, the dollar closed at DM1.8420 from DM1.8435. On Bank of England figures, the dollar's exchange rate index closed at 66.8 from 66.7.

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu central rates	Currency amounts against Ecu Feb.21	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	42.4582	43.6960	+2.92	+0.91	±1.5344
Danish Krone	7.85212	8.10813	+3.26	+1.25	±1.5404
German D-Mark	2.05853	2.08410	+1.24	-0.77	±1.0981
French Franc	6.90403	7.09724	+2.80	+0.79	±1.3674
Dutch Guilder	2.31943	2.35248	+1.42	-0.59	±1.5012
Irish Punt	0.768411	0.781333	+1.68	-0.33	±1.6684
Italian Lira	1483.58	1525.93	+2.85	+1.61	±4.0752

Changes are for Ecu, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

£ IN NEW YORK

Feb.21	Latest	Previous Close
£ Spot	1.7500-1.7505	1.7745-1.7755
1 month	0.46-0.45pm	0.48-0.47pm
3 months	1.34-1.32pm	1.39-1.36pm
12 months	3.78-3.68pm	3.72-3.65pm

Forward premiums and discounts apply to the US dollar

STERLING INDEX

	Feb.21	Previous
8.30 am	97.5	97.6
9.00 am	97.5	97.6
10.00 am	97.5	97.6
11.00 am	97.6	97.7
Noon	97.6	97.7
1.00 pm	97.6	97.6
2.00 pm	97.6	97.6
3.00 pm	97.3	97.7
4.00 pm	96.9	97.7

POUND SPOT- FORWARD AGAINST THE POUND

Feb.21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
US	1.7470-1.7590	1.7500-1.7510	0.46-0.43cpm	3.05	1.34-1.29pm	3.00
Canada	2.0815-2.0930	2.0815-2.0825	0.31-0.18cpm	1.41	0.66-0.47pm	1.09
Netherlands	3.63½-3.67¼	3.63½-3.64½	1¾-1⅝orepm	5.56	5¼-5⅛pm	5.70
Belgium	67.50-68.40	67.50-67.60	32-22cpm	4.80	88-73pm	4.77
Denmark	12.53¾-12.67¼	12.53¾-12.54¾	5¼-4¼orepm	4.73	14¾-14¼pm	4.60
Ireland	1.2090-1.2205	1.2095-1.2105	0.51-0.46cpm	4.81	1.43-1.33pm	4.56
W. Germany	3.22-3.25¾	3.22¼-3.22¾	1⅝-1½pfpm	5.81	4⅞-4⅝pm	5.97
Portugal	265.10-267.30	265.10-266.10	50-10cpm	1.36	105-10pm	0.87
Spain	201.05-203.05	201.15-201.45	15-parcpm	0.45	10pm-10dis	-
Italy	2361-2385¼	2362½-2363½	4-parlirepm	1.02	8-1pm	0.76
Norway	11.72¼-11.80	11.72¾-11.73¾	1½-1orepm	1.28	5¼-4⅝pm	1.68
France	10.96¼-11.09	10.98-10.99	3¼-3⅛cpm	3.48	9⅝-9¼pm	3.44
Sweden	11.04½-11.12	11.04½-11.05½	1½-1¼orepm	1.56	5½-5⅛pm	1.92
Japan	221¼-223¾	221¼-222¼	1½-1⅜ypm	7.78	4½-4¼pm	7.89
Austria	22.69-22.88	22.69-22.72	11¼-10⅝gropm	5.77	35¼-32¼pm	5.98
Switzerland	2.74-2.77¼	2.74-2.75	1⅝-1½cpm	6.83	4¾-4½pm	6.74

Belgian rate is convertible francs. Financial franc 67.85-67.95. Six-month forward dollar 2.48-2.43cpm 12 months 3.85-3.75cpm

DOLLAR SPOT- FORWARD AGAINST THE DOLLAR

Feb.21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.7470-1.7590	1.7500-1.7510	0.46-0.43cpm	3.05	1.34-1.29pm	3.00
Ireland†	1.4370-1.4520	1.4485-1.4495	0.25-0.30cdis	-2.29	0.72-0.82dis	-2.14
Canada	1.1870-1.1925	1.1895-1.1905	0.14-0.19cdis	-1.66	0.54-0.61dis	-1.93
Netherlands	2.0730-2.0945	2.0795-2.0805	0.46-0.43cpm	2.56	1.47-1.42pm	2.76
Belgium	38.50-38.90	38.55-38.65	7.00-4.00cpm	1.70	20.00-14.00pm	1.75
Denmark	7.16¼-7.21¾	7.16¼-7.16¾	1.15-0.90orepm	1.71	3.05-2.75pm	1.61
W. Germany	1.8350-1.8555	1.8415-1.8425	0.45-0.42pfpm	2.82	1.39-1.35pm	2.96
Portugal	151-152½	151¼-151½	12-32cdis	-1.71	55-105dis	-2.07
Spain	114.63-115.70	115.00-115.10	29-32cdis	-3.17	83-91dis	-3.02
Italy	1345¼-1359	1349¾-1350¼	1.70-2.70liredis	-1.95	6.00-8.50dis	-2.14
Norway	6.70-6.72	6.70-6.70½	0.85-1.10oredis	-1.74	2.20-2.50oredis	-1.40
France	6.25¼-6.31¼	6.27¼-6.27¾	0.22-0.17cpm	0.37	0.90-0.65pm	0.49
Sweden	6.30-6.34	6.31-6.31½	0.70-0.90oredis	-1.52	1.55-1.78dis	-1.05
Japan	126.50-127.40	126.70-126.80	0.52-0.50ypm	4.81	1.59-1.56pm	4.96
Austria	12.96¼-13.04¼	12.96¼-12.96¾	3.30-2.80gropm	2.81	10.70-9.20pm	3.06
Switzerland	1.5620-1.5785	1.5680-1.5690	0.47-0.44cpm	3.46	1.50-1.46pm	3.76

† UK and Ireland are quoted in US currency. Forward premiums and discounts apply to the US dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 38.75-38.85.

EURO-CURRENCY INTEREST RATES

Feb.21	Short term	7 Days notice	One Month	Three Months	Six Months	One Year
Sterling	12⅝-12½	12¼-12⅛	12¹³⁄₁₆-12⅝	13⅛-12⅞	13⅛-12⅞	12¹³⁄₁₆-12¹¹⁄₁₆
US Dollar	9¼-9⅛	9⅜-9¼	9⅝-9½	9¹³⁄₁₆-9⅞	10-9¾	10⅛-10⅛
Can. Dollar	11⅛-10⅞	11-10¾	11¼-11	11⅝-11⅜	11¾-11⅝	12-11¾
D. Guilder	5¾-5⅝	6⅜-6¼	6½-6⅜	6⅞-6¾	7-6⅞	7⅛-6⅞
Sw. Franc	5⅝-5½	5¾-5½	5¾-5⅝	5¹³⁄₁₆-5¹¹⁄₁₆	6-5⅞	6-5⅞
Deutschmark	5⅞-5¾	6-5⅞	6⅜-6¼	6⅝-6½	6⅝-6½	6¾-6⅝
Fr. Franc	8¾-8⅝	8¹³⁄₁₆-8¹¹⁄₁₆	9⅛-9	9⅜-9¼	9½-9⅜	9⅞-9¾

Long term Eurodollars: two years 10⅛-10⅛ per cent; three years 10⅛-10 per cent; four years 10⅛-10 per cent; five years 10⅛-9⅞ per cent nominal. Short term rates are call for US Dollars and Japanese Yen; others, two days' notice.

FINANCIAL FUTURES

Looking for action from Fed

ACTION AND not more words are looked for from the US Federal Reserve at present. Dealers would like it confirmed that the Fed has raised its target rate for Federal funds, or better still a rise in the US discount rate, rather than yesterday's comments from the Fed chairman about being inclined to act in the direction of restraint.

In a general mood of disappointment at the lack of action from the US authorities interest rate futures weakened on Liffe yesterday. A decline in short sterling and long gilt futures also followed concern at a sudden weakening of the pound.

June is now by far the most active month in short sterling futures. The June contract continues to weaken as doubts grow about the likelihood of a cut in UK bank base rates before delivery. Last night's close of 87.37 discounts a Libor rate of 12.63 per cent on delivery, compared with 87.46 and a final Libor rate of 12.54 per cent on Monday.

LIFFE LONG GILT FUTURES OPTIONS

LIFFE US TREASURY BOND FUTURES OPTIONS

LIFFE FT-SE INDEX FUTURES OPTIONS

LIFFE £/$ OPTIONS £25,000 (cents per £1)

LIFFE EURODOLLAR OPTIONS

LIFFE SHORT STERLING

PHILADELPHIA SE £/$ OPTIONS £31,250 (cents per £1)

LONDON SE £/$ OPTIONS £12,500 (cents per £1)

LONDON (LIFFE)

CHICAGO

EUROPEAN OPTIONS EXCHANGE

TOTAL VOLUME IN CONTRACTS : 44,088

A=Ask B=Bid C=Call P=Put

CURRENCY RATES

CURRENCY MOVEMENTS

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (Base Average 1985=100) *Rates are for Feb.20.

OTHER CURRENCIES

*Selling rate

EXCHANGE CROSS RATES

Yen per 1,000: French Fr. per 10: Lira per 1,000: Belgian Fr. per 100

MONEY MARKETS

Rates hold firm

THE TONE to interest rates remained firm yesterday in London, New York and Frankfurt. Three-month interbank rose to 13⅛-12⅞ per cent in London as sterling came under pressure on the foreign exchanges.

In New York the Federal Reserve drained reserves from the banking system via two-day matched sale and repurchase agreements, when Federal funds were trading at 9⅝ per cent. The market believes the Fed may have raised its target for overnight Fed funds to 9¾-9⅞ per cent from 9-9⅝ per cent. Last Friday the rate averaged 9.31 per cent.

In Frankfurt short term interest rates had a firmer tone on disappointment that the Bundesbank set another tender with no fixed rate for this week's securities repurchase agreement. At last week's tender - also without a fixed rate - most bids were below 6 per cent, but ranged between 5.90 per cent and 6.20 per cent. Not much change is expected this week, but dealers warned that some banks are likely to bid at a high level to ensure receiving funds.

Call money rose to 5.85 per cent from 5.75 per cent as the lack of a a fixed rate tender and tax payments were expected to keep upward pressure on rates. Tax payments later this week will drain money from the banking system, but the Bundesbank is not expected to fully replace today's expiring repurchase pact of DM8.4bn. The market believes this week's allocation will be between DM6bn and DM8bn, as latest figures show that banks holdings of reserves at the central bank are higher than the probable required average for the month.

Average reserve holdings for the first 19 days of February were DM58.6bn. This requirement for the whole month may be announced tomorrow, and is expected to be around DM56bn.

In London the Bank of England initially forecast a money market shortage of £350m, but revised this to £450m at noon, and back to £350m in the afternoon. Total help of £271m was provided.

The authorities did not operate in the market before lunch, but in the afternoon bought £16m bank bills in band 2 at 12⅞ per cent. Late assistance of £255m was also provided.

Bills maturing in official hands, repayment of late assistance and a take-up of Treasury bills drained £412m, with Exchequer transactions absorbing £75m. These outweighed a fall in the note circulation adding £60m to liquidity and bank balances above target of £60m.

UK clearing bank base lending rate 13 per cent from November 25

FT LONDON INTERBANK FIXING

(11.00 a.m. Feb.21) 3 months US dollars		6 months US Dollars	
bid 9⅞	offer 9⅞	bid 9⅞	offer 10

The fixing rates are the arithmetic means rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11.00 a.m. each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

MONEY RATES

NEW YORK

Treasury Bills and Bonds

LONDON MONEY RATES

BASE LENDING RATES

CROSSWORD

No.6,867 Set by TANTALUS

ACROSS

1 Agreed not to begin (8)
5 Church material may be resold (6)
9 Flower always remembered? (8)
10 Account concerning base metal (6)
12 Depict engineers here (9)
13 This man has an appetite! (5)
14 Tax a Caledonian (4)
16 Indian loaf for fellow at lunch-time? (7)
19 Not as heavy as an open boat (7)
21 Thought almost perfect (4)
24 Set up mine shaft with companion (5)
25 Join colleague (9)
27 Look into building - it's soothing (6)
28 Treading awkwardly to hill (8)
29 Doorman gets sweet beer (6)
30 Rent once collected to provide fabric (8)

DOWN

1 Comment about evangelist (6)
2 Quick to remind (6)
3 Mean to shut (5)
4 Spear I'd found in river (7)
6 Start eating or I shall collapse! (9)
7 Sell a pin maybe that's splint-like (8)
8 Bird to alight on fence (8)
11 No twitching of the ear! (4)
15 Constable could arrest central European (9)
17 The sound of Rosipante moving? (4-4)
18 Characters in IRA got at protestor (8)
20 Are all items genuine in here? (4)
21 One who offers cover (7)
22 Navy supports arguments for billet (6)
23 Pay for seat (6)
26 Rebellion leader has time to meet trainee (5)

Solution to Puzzle No.6,866

JOTTER PAD

WORLD STOCK MARKETS

AUSTRIA — [illegible]

BELGIUM/LUXEMBOURG — [illegible]

DENMARK — [illegible]

FINLAND — [illegible]

FRANCE — [illegible]

FRANCE (continued) — [illegible]

GERMANY — [illegible]

GERMANY (continued) — [illegible]

ITALY — [illegible]

ITALY (continued) — [illegible]

NETHERLANDS — [illegible]

NORWAY — [illegible]

SPAIN — [illegible]

SWEDEN — [illegible]

SWITZERLAND — [illegible]

SOUTH AFRICA — [illegible]

AUSTRALIA — [illegible]

AUSTRALIA (continued) — [illegible]

HONG KONG — [illegible]

SINGAPORE — [illegible]

JAPAN — [illegible]

NOTES – Prices on this page are as quoted on the individual exchanges and are last traded prices. (u) Unavailable. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

CANADA

TORONTO

2pm prices February 21

Quotations in cents unless marked $.

[illegible]

‡–No voting rights or restricted voting rights.

INDICES

NEW YORK — DOW JONES

	Feb 17	Feb 16	Feb 15	Feb 14	1988/89 High	1988/89 Low	Since compilation High	Since compilation Low
♦Industrials	2324.82	2311.43	2303.93	2281.25	2347.14 (7/2/89)	1879.14 (20/1/88)	2722.42 (25/8/87)	41.22 (2/7/32)
Home Bonds	88.83	88.80	88.94	89.02	91.25 (3/3/88)	86.12 (4/1/88)	-	-
Transport	1082.79	1079.24	1075.36	1062.10	1087.97 (7/2/89)	737.57 (21/1/88)	1101.16 (14/8/87)	12.32 (8/7/32)
Utilities	186.46	186.17	186.52	186.05	191.15 (24/1/89)	167.26 (20/4/88)	227.83 (22/1/87)	10.50 (8/4/32)

♦Day's High 2339.11 (2326.07) Low 2301.96 (2293.04)

STANDARD AND POOR'S	Feb 17	Feb 16	Feb 15	Feb 14	1988/89 High	1988/89 Low	Since compilation High	Since compilation Low
Composite‡	296.76	294.81	294.24	291.81	299.63 (7/2/89)	242.63 (20/1/88)	336.77 (25/8/87)	4.40 (1/6/32)
Industrial	342.66	340.45	339.84	336.74	346.41 (7/2/89)	277.86 (20/1/88)	393.17 (25/8/87)	3.62 (21/6/32)
Financial	27.14	26.89	26.80	26.57	27.24 (7/2/89)	21.51 (8/1/88)	32.43 (25/8/87)	8.64 (1/10/74)
NYSE Composite	166.45	165.51	165.21	163.94	168.02 (7/2/89)	136.72 (20/1/88)	187.99 (25/8/87)	4.46 (25/4/42)
Amex Mkt. Value	325.95	325.15	325.21	322.96	327.23 (8/2/89)	262.76 (12/1/88)	365.01 (13/8/87)	29.31 (9/12/72)
NASDAQ OTC Comp	407.19	405.70	404.17	402.02	409.19 (7/2/89)	331.97 (12/1/88)	456.28 (26/8/87)	54.87 (31/10/72)

	Feb 10	Feb 3	Jan 27	year ago (approx.)
Dow Industrial Div. Yield	3.63	3.45	3.46	3.48

	Feb 15	Feb 8	Feb 1	year ago (approx.)
S & P Industrial div. yield	3.13	3.05	3.05	3.05
S & P Indl. P/E ratio	13.63	13.85	13.79	16.54

TRADING ACTIVITY — †Volume Millions

	Feb 17	Feb 16	Feb 15
New York	159.520	177.450	154.220
Amex	11.892	12.010	10.860
OTC	114.149	149.254	123.178

NEW YORK	Feb 17	Feb 16	Feb 15
Issues Traded	1,951	1,939	1,951
Rises	953	805	888
Falls	497	599	550
Unchanged	501	535	513
New Highs	58	61	55
New Lows	13	12	20

CANADA

TORONTO	Feb 20	Feb 17	Feb 16	Feb 15	1988/89 High	1988/89 Low
Metals & Minerals	3425.3	3441.7	3414.6	3397.4	3564.9 (6/2/89)	2238.7 (8/2/88)
Composite	3599.1	3610.8	3606.7	3609.9	3696.1 (8/2/89)	2977.9 (8/2/88)
MONTREAL Portfolio	1787.31	1797.73	1793.31	1794.26	1850.44 (8/2/89)	1305.06 (27/1/88)

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
Navistar	2,750,400	5⅞	− ⅛	Fleming	1,840,300	31⅝	—
Niag Mohawk	2,644,400	12	—	Exxon	1,477,100	44⅝	− ⅛
Kan-Cy Pwr	2,129,300	30⅛	+ ⅛	AT&T	1,441,400	31½	+ ¼
Union Carbide	1,982,600	32	− ⅛	General Electric	1,416,800	46⅞	+ ⅞
Church Chi	1,879,400	10¼	—	Eastman Kodak	1,381,800	48⅝	+ 1

Base values of all indices are 100 except NYSE All Common – 50; Standard and Poor's – 10; and Toronto Composite and Metals – 1000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. (c) Closed. (u) Unavailable.

	Feb. 21	Feb. 20	Feb. 17	Feb. 16	1988/89 High	1988/89 Low
AUSTRALIA						
All Ordinaries (1/1/80)	1481.4	1473.1	1448.1	1451.0	1657.8 (9/8/88)	1170.7 (10/2/88)
All Mining (1/1/80)	677.5	671.6	655.0	664.6	847.8 (9/8/88)	532.4 (10/2/88)
AUSTRIA						
Credit Aktien (30/12/84)	244.00	242.14	240.57	239.33	244.00 (21/2/89)	163.98 (11/2/88)
BELGIUM						
Brussels SE (1/1/84)	5754.93	5757.74	5767.43	5789.14	5834.01(10/2/89)	3608.35(4/1/88)
DENMARK						
Copenhagen SE (3/1/83)	288.24	288.44	287.90	289.50	291.83 (10/2/89)	180.68 (4/1/88)
FINLAND						
Unitas General (1975)	782.1	784.2	782.6	782.4	784.2 (20/2/89)	530.6(15/1/88)
FRANCE						
CAC General (31/12/82)	445.0	439.1	440.3	440.4	457.1(3/2/89)	251.3 (29/1/88)
Ind. Tendance(30/12/88)	104.2	103.0	103.0	103.6	108.1(3/2/89)	100.0 (1/1/89)
GERMANY						
FAZ Aktien (31/12/58)	553.80	556.61	556.32	557.52	569.27(8/2/89)	396.40 (29/1/88)
Commerzbank (1/12/53)	1650.7	1661.4	1660.3	1663.5	1705.6(5/1/89)	1207.9 (29/1/88)
DAX (30/12/87)	1307.52	1319.91	1315.09	1317.91	1371.10(5/1/89)	931.18 (28/1/88)
HONG KONG						
Hang Seng Bank (31/7/64)	3150.64	3159.84	3106.25	3081.14	3209.96 (9/2/89)	2223.56 (8/2/88)
ITALY						
Banca Com. Ital. (1972)	591.43	591.95	586.22	583.12	615.89 (17/1/89)	423.91 (9/2/88)
JAPAN						
Nikkei (16/5/49)	31980.08	32177.08	32173.39	32083.5	32177.08(20/2/89)	21217.04 (4/1/88)
Tokyo SE (Topix) (4/1/68)	2452.91	2470.37	2473.33	2468.19	2490.07(8/2/89)	1690.44 (4/1/88)
NETHERLANDS						
ANP-CBS General (1970)	308.2	307.7	303.7	303.7	310.7 (8/2/89)	205.7 (4/1/88)
ANP-CBS Industrial (1970)	268.2	267.8	265.5	264.9	272.7 (8/2/89)	157.9 (11/1/88)
NORWAY						
Oslo SE (4/1/83)	568.27	567.14	560.94	553.84	568.27 (21/2/89)	327.78 (28/1/88)
SINGAPORE						
Straits Times Ind. (30/12/66)	1131.53	1132.77	1129.93	1129.83	1177.87 (8/8/88)	833.60(4/1/88)
SOUTH AFRICA						
JSE Gold (28/9/78)	1316.0(c)	1309.0	1293.0	1303.0	1451.0 (7/7/88)	1154.0 (4/5/88)
JSE Industrial (28/9/78)	2235.0(c)	2217.0	2200.0	2200.0	2246.0 (9/2/89)	1387.0 (12/2/88)
SPAIN						
Madrid SE (30/12/85)	272.67	273.17	273.20	274.35	301.63 (15/6/88)	225.50 (4/1/88)
SWEDEN						
Jacobson & P. (31/12/56)	3699.8	3669.4	3667.2	3648.7	3699.8 (21/2/89)	2148.5 (4/1/88)
SWITZERLAND						
Swiss Bank Ind. (31/12/58)	650.9	649.4	646.8	647.9	650.9 (21/2/89)	466.6 (13/1/88)
WORLD						
M.S. Capital Intl. (1/1/70)	(u)	518.3	519.0	517.5	519.0 (19/2/89)	401.0 (21/1/88)

♦ Subject to official recalculation.

Base values of all Indices are 100 except Brussels SE and DAX – 1,000 JSE Gold – 255.7 JSE Industrials – 264.3 and Australia. All Ordinary and Mining – 500; (c) Closed. (u) Unavailable.

TOKYO - Most Active Stocks

Tuesday 21 February 1989

	Stocks Traded	Closing Prices	Change on day		Stocks Traded	Closing Prices	Change on day
Mitsui Mining & Smelting	45.1m	881	-38	Ube Industries	31.5m	865	+18
Fuji Electric	43.3m	965	+35	Sumitomo Metal	30.8m	840	-15
Nippon Steel	40.9m	960	-15	Japan Steel Works	28.8m	1,390	+100
Taisei Corp	37.2m	1,700	-20	Denki Kagaku Kogyo	29.8m	868	+33
Shimizu	32.3m	2,160	-20	Mitsui Toatsu	21.4m	943	+8

3pm prices February 21

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
28⅞	20⅞	AAR	.44	1.7	16	251	26½	26⅛	26⅛	− ⅛
10⅞	8½	ACM s	1.01	11.		59	9	8⅞	9	+ ⅛
12⅛	10⅛	ACMIn	1.28a	12.		441	11	10⅞	10⅞	
10½	8½	ACM M	n1.01	11.		87	9⅛	9⅛	9⅛	
12⅛	10⅛	ACM Sc	1.25	12.		547	10½	10⅛	10⅛	
10⅛	8½	ACMSp	n.75a	8.6		407	8⅞	8⅞	8⅞	
5⅛	2½	AMCA	.12e	2.9		40	4⅛	4⅛	4⅛	
6⅛	3⅞	AM Intl				164	5⅞	5⅞	5⅞	
23⅛	18⅛	AM Int pf	2	8.8		38	23	22⅞	23⅛	− ⅛
62⅛	37⅞	AMR			8	4116	61⅛	60⅛	61	+ ⅞
26⅛	25	ANR pf	2.67	11.		1	25⅛	25⅛	25⅛	
9½	5	ARX				169	5⅛	5	5⅛	
46⅞	35⅛	ASA	3a	7.5		1027	40	39⅞	39⅞	+ ⅛
20⅛	14⅞	AVX	.24	1.3	9	83	18	17⅞	18	
52⅞	42⅞	AbtLab	1.20	2.3	18	5186	52⅛	51½	51⅞	+ ⅛
20⅛	15⅞	Abitibi g	1			37	17⅞	17⅞	17⅞	
13⅞	7⅞	AcmeC	.40	3.5		111	11⅞	11⅞	11⅛	− ⅛
9⅞	6⅞	AcmeE	.32b	5.2	22	2	6⅛	6⅛	6½	− ⅛
29½	18⅛	Acuson			24	309	29⅛	28⅞	28⅞	+ ⅛
17	14½	AdaEx	1.83e	12.		97	15	14⅞	14⅞	
16⅞	7⅛	AMD			79	1185	6⅛	6⅞	6⅞	
48½	28⅛	AMD pf	3	9.3		14	32½	32⅛	32⅞	+ ⅛
8½	6⅞	Adobe				157	7⅞	7½	7½	− ⅛
18½	10½	Adob pf	1.84	11.		3	17½	17½	17½	− ⅛
21⅛	20	Adob pf	2.40	12.		9	20⅛	20⅞	20⅞	+ ⅛
9⅛	5⅞	Advest	.12	1.5	17	103	8⅛	8⅛	8⅛	
52⅛	39½	AetnLf	2.76	5.5	9	653	50⅞	50⅛	50½	− ⅞
44½	24	AhPb s	.22	.5		135	40⅛	40⅛	40⅛	+ ½
18⅛	13⅛	Ahmans	.88	5.0	8	872	17⅞	17½	17½	− ⅛
4⅞	2	Aileen			18	69	3⅛	3⅛	3⅛	− ⅛

Continued on Page 45

NYSE COMPOSITE PRICES

Continued from previous Page

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
27½	15⅞	QuakSC	.80	4.2	33	1886	19	18⅞	19	+ ⅛
18	7¾	Quanex	.24	1.4	9	86	17¾	17⅞	17½	+ ⅛
60½	51⅛	Questar	3	5.2	4	1977	58½	58⅞	57⅞	− ⅛
11⅛	9½	QstVl	1.20	11.		189	11¼	11⅛	11⅛	
10⅛	7⅛	QstVC	.09			237	9⅞	9⅞	9⅞	
35⅛	29⅞	Questar	1.80	5.8	25	354	32⅛	32⅞	32½	− ⅛
15⅞	10½	QkReily	.24	1.6	12	68	10	14⅞	14⅞	− ¼
		−R−R−R−								
12	10⅝	RAC In e				161	11	10⅞	10⅞	− ⅛
11⅛	4½	RAC	1.31e	24.	6	332	5½	5⅜	5⅜	− ⅛
12¼	5⅞	RBInd				20	11½	11⅛	11⅞	
100½	44⅞	RJR Nb	2.20	2.6	14	748	84⅞	84½	84⅝	+ ⅛
84½	79⅞	RJR wd				11695	u85⅛	84⅛	84½	+ ⅛
10½	6	RLC	.20b	2.0	11	168	10	9⅞	10	
12½	7⅛	RLI Cp	.36	6.8	8	85	9⅛	9	9⅛	+ ⅛
7	4⅞	RPC			20	87	6⅞	6⅜	6⅜	− ⅛
7½	6	RPS e				46	6⅞	6	6	
50½	28½	Racal e				1757	50½	49⅞	50⅜	+ ⅝
1⅛	5-16	Radice				60	15-32	7-16	15-32	
88½	66	RalsPur	1.85	2.0	12	402	93⅞	92⅛	92⅞	− ⅛
11¼	6⅛	Ramad				3173	11	10½	10⅞	− ⅛
6½	4⅞	RangrO			30	546	5⅛	4⅞	5½	
64⅛	66¼	Raycm	.32	.9	12	885	35⅛	35¼	35½	
14⅞	9	RJamFn	.20	7.4	9	7	15⅞	15⅞	15⅞	
31⅝	17⅞	Rayonr	2.80	13.	6	147	20½	20⅛	20⅛	− ⅛
8½	2⅝	Raytch	.05e	1.5		8	3⅛	3⅜	3⅛	+ ⅛
73⅞	61	Raythn	2	2.0	9	1297	88½	87⅞	88	− ⅛
2½	½	ReadBt				282	⅜	⅝	⅝	− ⅛
5⅞	1⅛	RdBat pf				12	2⅝	2⅛	2⅝	+ ⅛
5⅞	1⅛	RdBt pfA				5	2⅛	2⅛	2⅛	+ ⅛
12	15⅛	REIT	1.30	6.8	16	40	18⅝	18	18⅛	
16½	14⅞	RltRef	1.72	11.	8	8	16	16	16	+ ⅛
12⅛	3½	RecnEq			30	275	10	9⅝	9⅞	

OVER-THE-COUNTER

Nasdaq national market, 2pm prices February 21

Stock	Div.	Sales 100s	High	Low	Last	Chng
Wyman	.80	14 128	15⅛	14⅛	14⅛	− ½
		−X−Y−Z−				
XL Dta		20 512	23	22	32⅝	
XOMA		148	13¼	18½	13½	− ⅛
X-Rite s	.05	12 83	10½	10⅞	10⅛	− ⅛
Xicor		18 273	8	7⅛	7⅞	− ⅛
Xyvan		65 75	5⅛	8⅝	5⅞	
YelowF	.70	16 858	20⅛	28¼	26	+ ⅛
ZionUt	1.44	58	21⅝	21½	21½	

AMEX COMPOSITE PRICES

2pm prices February 21

AMERICA

Dow drifts as Greenspan steals limelight

Wall Street

ATTENTION focused yesterday on the testimony to Congress by Mr Alan Greenspan, chairman of the US Federal Reserve, and equities traded in a narrow range in quiet trading, *writes Janet Bush in New York.*

The Dow Jones Industrial Average started with modest gains and at 2 pm, the index stood up just 0.18 at 2,325.00 on only moderate volume of 87m shares.

Trading activity has dropped since the healthy daily volumes recorded in the second half of January and the first half of this month. Last week, total volume was its lowest for five weeks and failed to pick up even when, on Thursday and Friday, the market rebounded from a string of daily losses.

The environment was not particularly favourable for a continuation of that rally yesterday, as Mr Greenspan started his regular Humphrey-Hawkins testimony to Congress and the reaction to it by both the dollar and US Treasury bonds was somewhat negative.

The dollar had been trading quite strongly in European markets, but then dipped as Mr Greenspan testified. At midsession, the US currency was quoted at its lows of the session of Y126.60 and just above its lows against the West German D-Mark at DM1.8375.

The slide in the dollar appeared to follow disappointment that the Fed chairman did not announce any new initiatives to fight inflation – in other words, a rise in the discount rate.

Stocks and bonds dipped in line with the weakening dollar, but the reaction was not dramatic in either market.

Nothing that Mr Greenspan said was particularly surprising. He was duty bound to speak strong words about inflation to justify the tightening in monetary policy last week, amid noises from the Administration that it was not happy with higher interest rates.

On the other hand, Mr Greenspan did not seem to signal any significant need to raise interest rates further, saying that monetary policy was about on track.

Another reason for caution was the fact that consumer prices figures for January are released today. Markets are particularly sensitive about these figures because of the worrying jump in producer prices for the same month.

The narrow trading range was also partly tied to the fact that the market had reversed its downtrend so significantly at the end of last week. Now the question is whether it will continue its recovery to reach its post-crash closing high on the Dow Jones Industrial Average – achieved on February 7 – of 2,347.14.

Among featured individual stocks was Texas Eastern, which jumped $3¼ to $52 in response to news of a $53-a-share offer in cash and shares from Panhandle Eastern. That bid improved on a $42-a-share offer from Coastal, which said that it was considering whether to raise its offer or withdraw from the bidding. Panhandle was quoted down $¾ at $23¾, while Coastal dipped $⅞ to $34⅞.

Arvin Industries surged $3 to $24⅛ after news that Mr Ismando Wanandi, an Indonesian investor, had built up a 5.6 per cent stake in the company and may try to take it over. Arvin has said it wants to remain independent.

Polaroid lost $⅝ to $43⅝. The company is offering to buy back 16m shares for $50 each in its continued efforts to stave off the hostile takeover bid by Shamrock Holdings.

Cordis gained $1⅛ to $13⅜ in over-the-counter trading after the company pleaded guilty to charges related to its former cardiac pacemaker operations and agreed to pay fines and reimbursements.

Canada

THE STRENGTH of gold and energy stocks was insufficient to counter lower industrial and bank issues in Toronto and the midday composite index was off 2.5 at 3,596.6. Volume reached 12.4m shares.

Corona was unchanged at C$8⅝ after Kam-Kotia Mines and Dickenson Mines rejected its takeover offer for them. Kam-Kotia was down 7 cents at C$2.53 and Dickenson Mines was steady at C$6⅝.

EUROPE

Worry over interest rates again clouds the horizon

INTEREST rate worries, school holidays and profit-taking left most European bourses unchanged or weaker in thin turnover, *writes Our Markets Staff.*

PARIS began the March account on a quiet note, as technical problems delayed trading on the continuous market until early afternoon. Interest rate worries dampened enthusiasm and volumes were restricted by the absence of many investors, who were taking time off for their children's school holidays.

The OMF 50 index rose 6.57 to 465.17, while the CAC 40 index was unavailable. The market ended the February account lower for the first time in 10 accounts, but even then it was only off about 0.2 per cent.

Eurotunnel was the busiest stock again, adding FFr4.85 to FFr94.75 with over 2m shares traded. Casino was active, rising FFr10.50 to FFr216.50 on revived rumours that family members might be interested in selling their 30 per cent stake.

Metaleurop shone brightly again as investors returned to the metals issue after profit-taking. It rose FFr7.30, or 4.9 per cent, to FFr157.50.

FRANKFURT continued to suffer from a lack of interest and corporate news, with volume remaining very low at DM2.24bn. Share prices eased, although there were signs that some money was moving into stocks in more defensive sectors such as retailing.

The FAZ index shed 2.81 to 553.80 and the DAX lost 12.39 to 1,307.52. A rise in the dollar before the congressional testimony by Mr Alan Greenspan, the US Federal Reserve chairman, renewed concern about interest rate rises.

Foreign interest was low and one German fund manager said that three-quarters of his institutional orders from abroad in the past two to three weeks had been sales.

Among the more defensive second-liners, retailer Karstadt rose DM2.10 to DM427 and construction stock Holzmann gained DM2 to DM681.

Utility RWE shed DM4.50 to DM254.50 in the day's second most active trading. It has outperformed recently so the fall was attributed mainly to profit-taking. However, energy and metals group Viag said yesterday it would not sign another 20-year contract with RWE when it renegotiates next year.

Viag fell DM2.20 to DM255.80 after saying it expected a 10 per cent rise in 1988 group profits.

AMSTERDAM failed to hold onto Monday's gains and ended slightly easier as the dollar weakened after Mr Greenspan said he wanted the US currency to be stable. The CBS tendency index shed 0.10 to 165.9.

Philips added 40 cents to Fl 36.70 against the trend before tomorrow's 1988 results. Wolters Kluwer, the publisher, rose Fl 3 to Fl 156 after reporting higher profits and announcing it planned a 4-for-1 share split in May or June.

Insurer Amev shed Fl 2.10 of its speculative Fl 4.30 rise on Monday to close at Fl 56.90.

ZURICH had a quiet session, as investors awaited Mr Greenspan's testimony. The Crédit Suisse index added 2 to 552.9.

Metal company Alusuisse, much in demand of late on its profits forecast, saw its bearers shed SFr3 to SFr980 as the aluminium price weakened.

MILAN ran out of steam after Monday's 1 per cent rise and prices ended little changed in another thin day's trading, with the Comit index off 0.52 at 591.43.

Pirelli rose L75 to L3,080 against the trend, amid interest from domestic and foreign investors over the company's first publication of consolidated results in April.

BRUSSELS saw strong demand for steel shares on the opening day of the new forward market account, but the cash index eased 2.81 to 5,754.93.

In steels, Clabecq soared BFr260, or 10 per cent, to BFr2,890 on heavy turnover of 34,000 shares. Arbed rose BFr180, or 3.3 per cent, to BFr5,620.

GB-Inno, the retailer, rose BFr12 to BFr1,410 after reporting improved annual profits.

FINLAND eased on profit-taking after four consecutive record highs, and the Unitas index lost 1.1 to 783.1 in quiet trading. Amer free A shares fell FM5 to FM175 after being suspended on Friday for news of its purchase of Wilson Sporting Goods of the US.

MADRID turned its attention to interest rates after the previous day's news of higher inflation, and the general index fell 0.5 to 272.67.

SWEDISH investors have been busy abroad since the Government allowed unlimited purchases of foreign shares last month, *writes Hilary de Boer.*

Central Bank statistics released yesterday show Swedish demand for overseas equities reached a net SKr1.6bn ($254m) in value last month, compared with SKr48m in January last year. Total purchases last month equalled SKr2.8bn against sales of SKr1.2bn.

The new-found freedom to invest abroad could hit domestic liquidity, says Barclays de Zoete Wedd, in a flow of funds study on Sweden.

BZW expects net demand for Swedish shares to reach SKr7.7bn this year, compared with an estimated SKr18.7bn last year, when strong domestic liquidity made the bourse one of the world's top performing stock markets.

Since net demand for Swedish shares so far this year already equals SKr5.9bn, much of the money is now in the market. BZW says: "Without new money, the strong liquidity will only be a driving force for another two months or so."

Stockholm's equity market performed well yesterday, rising to another all-time high on strong demand for forestry shares and speculation about car maker Volvo. The Affärsvärlden index added 9 to 1,085.1 and turnover was worth SKr308m.

The strong pulp market helped Modo free B shares rise SKr30 to SKr450 while Stora B shares added SKr10 to SKr385.

Volvo B shares put on SKr14 to SKr460 in heavy trading. One analyst said there was speculation about the value of its property assets after the company said it was selling them to a new company which might be spun off and quoted on the exchange.

Sunshine breaks through in Oslo

But the outlook is for overcast weather, writes Karen Fossli

OSLO, one of the most lacklustre performers in Europe last year, has polished up its performance so brilliantly in the past seven weeks that it has taken even the most bullish analysts by surprise.

The market's 23 per cent jump in sterling terms since the start of January has pushed it way ahead of the other 23 countries covered by the FT-Actuaries World Indices.

After a strong performance in January, in line with rising world crude oil prices, the Norwegian index climbed a further 4.3 per cent last week, outperforming all other European bourses.

The immediate trigger was an unexpected cut in Norwegian interest rates, which has taken them to about 11.5 per cent in just one year from a high of 17 per cent.

The bourse was also buoyed by a 28 per cent rise in profits at Norsk Hydro, Norway's largest publicly quoted company. Norsk Hydro's influence over the Oslo bourse is considerable, affecting both the oil and the industrial indices, as well as the overall index. Oslo closed last week 14 points higher than the previous week because of Norsk Hydro.

Another key influence on Oslo's rapid rise has been the abolition of a 1 per cent share turnover tax. Although it did not directly influence the bank accounts of foreign investors, its scrapping encouraged foreigners to boost activity.

Also fuelling short-term confidence is the belief that a moderate wage settlement will be achieved this spring and that Norway's banks are over the worst, in terms of their business performance.

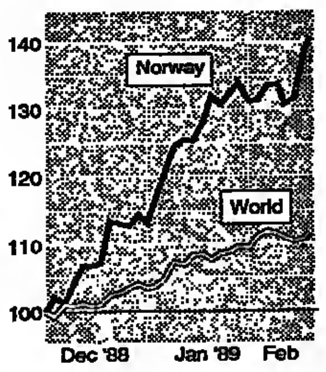
The advance is also partly due to Oslo's belated recovery from the world stock markets crash in October 1987. It remains the only Nordic bourse, and one of the few European bourses, that has yet to break its pre-crash record, of 442.44 reached on September 21, 1987. This week, the Oslo all-share index has hovered around the 424 level and analysts believe short-term prospects are encouraging. Mr Ian Clapp, an analyst with Bergen Bank London, predicts that interest rates will fall yet again over the next few weeks, helping market sentiment.

Mr Clapp believes that the amount of investment by foreigners is important for the bourse – and that international interest in Norway is determined by economic fundamentals.

Sustaining the rapid rise, however, is likely to become more difficult, according to some analysts. They predict that world crude oil prices, to which the Oslo market's health is closely linked, will weaken in the second half of this year. "Oil prices are about as far as they will get . . . and it's hard to see where another rise like that will come from," said one analyst. Moreover, elections, scheduled for September, are expected to produce uncertainty.

Also on the negative side, many Norwegian companies, with a few exceptions among blue chips, are releasing slightly disappointing results at the moment.

FT-A World indices in £ terms



After Norway's recent bright spell, it seems that the bourse may face more unsettled weather. As another analyst warns, Oslo is now on the edge of consolidation.

SOUTH AFRICA

GOLD shares were little changed in Johannesburg in moderate trading, as the bullion price remained steady. Declining golds included Vaal Reefs, off R1 at R279, and Freegold, down 25 cents at R29, while Western Deep rose 50 cents to R111.

ASIA PACIFIC

Nervousness saps Nikkei's strength

Tokyo

FEARS of rising prices again triggered a bout of profit-taking that sent share prices sharply lower, *writes Michiyo Nakamoto in Tokyo.*

After climbing in early trading to reach a high for the day of 32,177.28, the Nikkei average fell to a low of 31,949.95 before closing down 197 at 31,980.08. Declining issues far outnumbered those advancing, by 575 to 353, while 159 issues were unchanged. Turnover at 1.21bn shares was just below the 1.18bn traded on Monday.

The Topix index of all listed shares dropped 17.46 to 2,452.91. In later trading in London, however, the ISE/Nikkei 50 index rose 6.40 to 1,956.23.

Trading in Tokyo again began on a bullish tone and share prices rose quickly, only to fall back just as rapidly on profit-taking. This trading pattern of quick movements in and out of the market reflected growing nervousness, mainly about the high level of prices and the possibility of restrictions on margin transactions.

It is also becoming more difficult for institutional investors actively to take part in the market as the last settlement day of the month approaches.

The Recruit Cosmos share sale scandal remains a worrisome factor, in that the focus of attention has shifted from the business circle to the political circle. Most analysts agree, however, that concern about the developing Recruit scandal will not have a devastating effect on the market.

In spite of the profit-taking, the consensus is that the market still has a great deal of energy left. "A loss of 200 points in a market like this one is not much," said Mr Nicola Salatti of UBS Phillips & Drew.

Buying focused on issues that have been neglected and seemed relatively cheap. Among them were chemicals such as Mitsui Toatsu, which rose Y33 to a high of Y970 before closing up Y6 at Y940 in heavy trading.

Interest was scattered, with individual issues attracting considerable activity. Fuji Electric, a leading electric machinery maker, rose Y35 to Y965 on its strength in the development of pre-paid card systems. Pre-paid cards of multi-purpose use are the focus of much attention as the authorities produce reports on their feasibility. It was the second most actively traded stock at 43.3m shares.

Nippon Sanso, Japan's largest oxygen manufacturer, rose Y39 to Y904 on the strength of its development of coolant gas for superconductive systems and also as a low-priced issue.

Profit-taking led constructions and steels lower. Nippon Steel, third in volume terms with 40.9m shares, dropped Y10 to Y960. Mitsui Mining and Smelting, off Y38 at Y881, was the day's most actively traded issue with 45.1m shares.

Nippon Telegraph and Telephone (NTT) fell further, losing Y20,000 to Y1.62m. Investors are concerned about the effect on the company of the Recruit Cosmos share sale scandal, which led to the arrest of two former NTT executives.

Profit-taking dominated trading in Osaka, where the OSE average fell 117.79 to 30,235.96. Volume dropped to 102m shares from 119.2m on Monday.

Roundup

RESOURCES issues continued to support Australia, while a quiet session in Singapore and a volatile day in Hong Kong left both markets lower.

AUSTRALIA improved on Monday's 24-point advance as foreign demand for resources stocks buoyed the market. The All Ordinaries index rose 8.3 to 1,481.4 in moderate turnover of 114m shares worth A$198m, following a rise in the bullion price and gains on the London stock market.

NZI Corp dropped 7 cents to 33 cents, a low for this year, after cancelling its planned rights issue following accounting problems that led to a loss in its life assurance operations.

The Bond group of companies saw selective gains in the wake of Monday's results, with Bell Resources climbing 17 cents to A$1.35 and Bond Media adding 1 cent to 42 cents, while Bond Corp was unchanged at A$1.68.

Elders IXL, which yesterday raised its bid for MB Packaging of the UK, added 4 cents to A$2.89 on 2.41m shares.

In actively traded mining issues, Renison gained 18 cents to A$7.70 after Minorco's renewed bid for Consolidated Gold Fields of the UK.

SINGAPORE was dominated by the first day's trading in garment maker Wing Tai Holdings, but activity was quiet overall and the Straits Times industrial index dropped 1.24 to 1,131.53.

Wing Tai was busily traded throughout the session, moving between S$1.54 and S$1.88 before closing at S$1.87, well above the issue price of S$1.25. About 16.5m Wing Tai shares changed hands, helping to take the market's total volume to 45.6m shares against Monday's 28.3m.

HONG KONG ended lower after a volatile session, with the Hang Seng index losing 9.2 to 3,150.64, having been as high as 3,186. Properties took the brunt of the selling.

The lack of direction from Wall Street, which was closed on Monday, the wait for today's US inflation figures and the closure of Tokyo on Friday for the Emperor's funeral all took their toll.

New World fell 20 cents to HK$15 on news of a share swap with HKR Properties, off 5 cents at HK$2.65, and Mingly Corp, down 2 cents at 72 cents.

FT-ACTUARIES WORLD INDICES

Jointly compiled by The Financial Times Limited, Goldman, Sachs & Co., and County NatWest/Wood Mackenzie in conjunction with the Institute of Actuaries and the Faculty of Actuaries

NATIONAL AND REGIONAL MARKETS	MONDAY FEBRUARY 20 1989					FRIDAY FEBRUARY 17 1989			DOLLAR INDEX		
Figures in parentheses show number of stocks per grouping	US Dollar Index	Day's Change %	Pound Sterling Index	Local Currency Index	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Local Currency Index	1988/89 High	1988/89 Low	Year ago (approx)
Australia (89)	136.19	+2.3	114.49	110.60	4.87	133.19	111.18	108.29	157.12	91.16	98.90
Austria (18)	97.52	+0.2	81.98	93.38	2.64	97.36	81.28	92.82	100.00	83.72	87.17
Belgium (63)	134.98	-0.3	113.48	129.16	3.99	135.42	113.05	129.24	139.89	99.14	121.27
Canada (125)	133.76	-0.4	112.45	115.26	3.24	134.24	112.06	115.68	137.27	107.06	114.76
Denmark (39)	158.11	-0.1	132.93	154.30	1.91	158.22	132.08	153.81	161.60	111.42	116.34
Finland (26)	146.22	+0.6	122.93	131.28	1.34	145.38	121.36	130.28	147.07	106.78	114.86
France (130)	116.61	+0.7	98.03	114.87	2.83	115.83	96.69	113.60	119.98	72.77	87.80
West Germany (102)	85.50	-0.1	71.88	81.94	2.29	85.55	71.42	81.70	90.40	67.78	75.62
Hong Kong (44)	132.34	+2.0	111.26	132.55	3.61	129.78	108.34	129.98	133.77	84.90	89.65
Ireland (17)	142.55	+0.9	119.84	138.96	3.64	141.30	117.96	137.31	144.25	104.60	111.42
Italy (98)	81.65	+0.6	68.64	82.37	2.45	81.18	67.77	81.49	86.88	62.99	71.28
Japan (456)	198.24	-0.4	166.66	158.45	0.47	198.98	166.10	158.48	198.98	133.61	157.08
Malaysia (36)	157.21	-0.1	132.16	165.14	2.59	157.40	131.39	165.28	159.52	107.83	114.78
Mexico (13)	161.47	-0.1	135.74	411.33	1.24	161.65	134.95	411.81	182.24	90.07	138.75
Netherland (39)	115.01	+0.7	96.69	109.29	4.54	114.20	95.33	108.02	115.04	95.23	101.87
New Zealand (24)	72.55	-0.7	61.00	62.24	6.22	73.07	61.00	63.09	84.05	63.32	67.04
Norway (26)	169.82	+0.9	142.77	154.14	2.04	168.26	140.46	152.50	169.82	98.55	109.60
Singapore (26)	141.91	+0.3	119.30	125.89	2.12	141.54	118.15	125.30	143.62	97.99	104.98
South Africa (60)	126.20	+2.0	106.09	108.18	4.37	123.68	103.25	107.07	139.07	98.26	128.46
Spain (42)	144.34	-0.7	121.34	125.64	3.84	145.33	121.32	125.84	164.47	130.73	136.11
Sweden (35)	151.65	+0.0	127.49	141.38	2.19	151.61	126.56	141.17	151.85	96.92	109.00
Switzerland (57)	77.49	+0.2	65.15	75.28	2.26	77.36	64.58	74.80	86.75	74.13	81.07
United Kingdom (314)	152.04	+0.3	127.82	127.82	4.26	151.53	126.49	126.49	152.54	120.66	127.73
USA (568)	120.80	+0.0	101.56	120.80	3.58	120.80	100.84	120.80	121.90	99.19	108.13
Europe (1006)	120.30	+0.3	101.14	108.82	3.51	119.96	100.14	107.92	120.76	97.01	102.62
Nordic (126)	147.66	+0.2	124.13	134.62	1.99	147.43	123.07	134.13	147.65	98.11	106.91
Pacific Basin (675)	192.90	-0.3	162.17	155.11	0.67	193.41	161.45	154.99	193.41	130.81	152.18
Euro-Pacific (1681)	163.85	-0.1	137.75	136.71	1.52	164.01	136.91	136.30	164.01	120.36	132.37
North America (693)	121.49	+0.0	102.13	120.48	3.56	121.51	101.44	120.51	122.73	99.78	108.48
Europe Ex. UK (692)	100.77	+0.2	84.72	97.02	2.87	100.54	83.93	96.40	102.91	80.27	87.01
Pacific Ex. Japan (219)	129.08	+1.8	108.52	112.86	4.28	126.81	105.86	110.97	137.68	87.51	93.15
World Ex. US (1879)	162.43	-0.1	136.55	135.84	1.59	162.58	135.72	135.46	162.58	120.26	131.74
World Ex. UK (2133)	145.86	-0.1	122.62	131.04	1.97	146.01	121.89	130.89	146.01	111.77	122.09
World Ex. So. Af. (2387)	146.52	-0.1	123.18	130.87	2.17	146.63	122.40	130.62	146.63	113.26	122.54
World Ex. Japan (1991)	121.46	+0.2	102.11	116.20	3.58	121.23	101.20	115.77	122.34	100.00	106.05
The World Index (2447)	146.40	-0.1	123.07	130.72	2.19	146.49	122.29	130.46	146.49	113.37	122.58

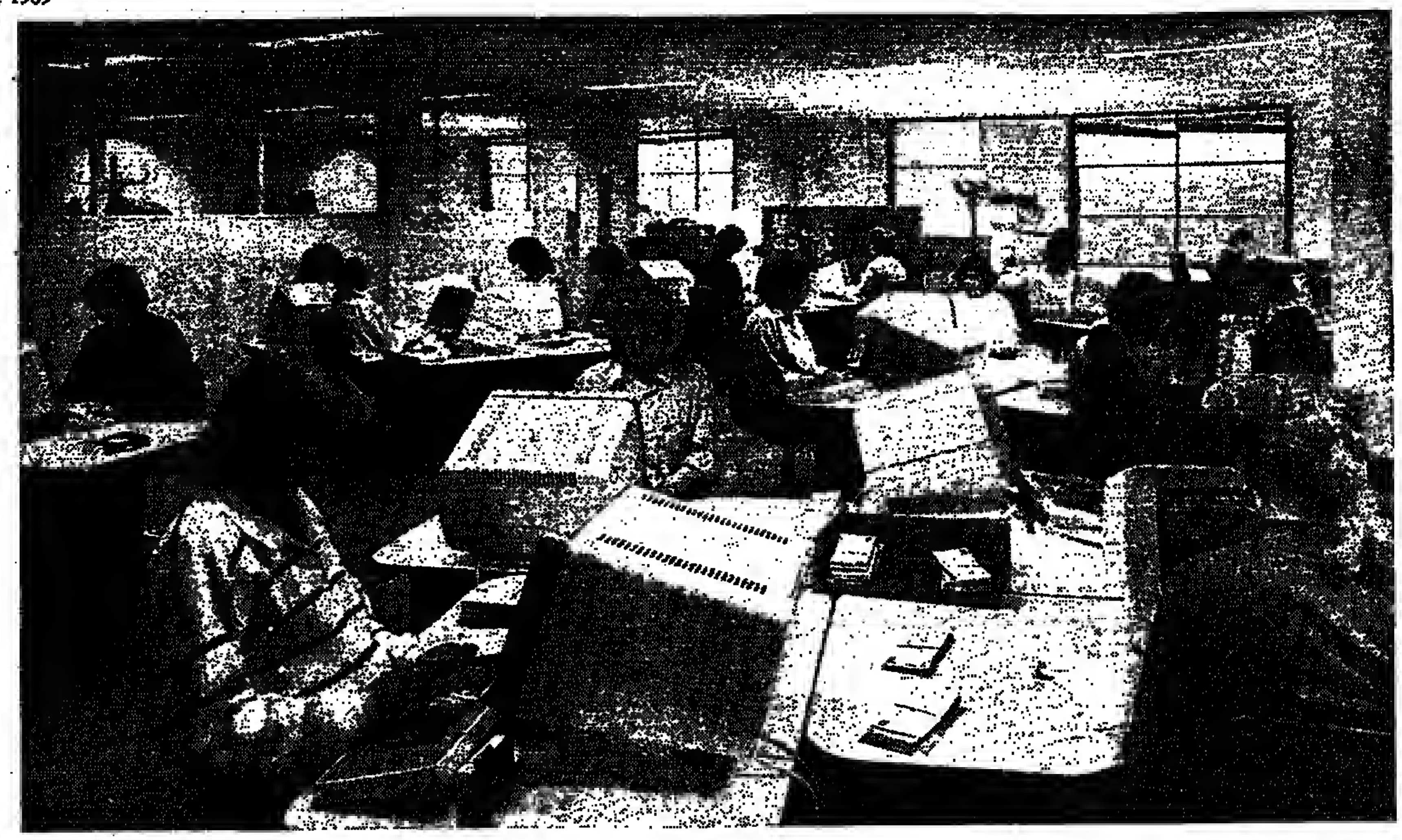
Base values: Dec 31, 1986 = 100; Finland: Dec 31, 1987 = 115.037 (US $ Index), 90.791 (Pound Sterling) and 94.94 (Local); Nordic: Dec 30, 1988 = 139.62 (US $ Index), 114.42 (Pound Sterling) and 123.18 (Local).

U.S market closed February 20. Latest prices were unavailable for this edition.

SECTION III

FINANCIAL TIMES SURVEY

There is a decidely uneven performance pattern across the various sectors of the world computer industry, but some suppliers who are finely-tuned to the turbulent and highly competitive computer market are doing exceptionally well, as Alan Cane reports here



The Computer Industry

CONTENTS

■ International markets compared, page 3 and 4
■ Main product sectors: supercomputers, mainframes, mid-range computers, workstations and personal computers, pages 4 to 8.
■ Key issues: operating systems debate, PC architecture; software and services, pages 6 and 7
■ Computer services: page 9
■ Case studies: pages 10 and 12
■ Portable computing, page 12

☐ *COMPUTER APPLICATION, pictured, left: Office staff et 40 worketatione key in details of around 500,000 delly charge card trensactione et the Swindon offices of PHH Allstar, the vehicle fleet menegement company. The compeny spends up to £8m a week in settling fuel bills by its clients' vehicle fleets.*

Shake-out well under way

THE LONG-ANTICIPATED shake-ont in the computer hardware industry worldwide is now well under way. The broad picture is changing almost daily as the effects of intensifying competition, high research and development costs and technological innovation take their toll.

The industry has recovered to some extent from the doldrums which have been afflicting it over the past few years, but if customers are spending money again, they are spending it more cautiously than in the past.

In particular, while they want value for money from their conventional data processing equipment and reckon they know how to get it, they are diffident about committing funds to information technology projects until the competitive advantages and justification becomes more clear.

Surveys by the management consultancy Price Waterhouse suggest only a modest increase in spending on computer hardware by US companies in 1989. The picture in Europe is a little brighter, while Japanese companies intend to spend strongly on both hardware and software.

The effects of the shake-out include a decidedly uneven performance pattern across the industry. In the microcomputer sector, for example, Thomson and Matra, two leading French electronics groups, earlier this month announced their withdrawal from the personal computer business after failing to make much headway in a market dominated in France by Internatioual Bnsiness Machines, Apple Computer and Groupe Bull.

Among minicomputer and midrange machine manufacturers, where competition is at its most fierce, a number of distinguished names are already in trouble.

Data General, which, with Digital Equipment Corporation (DEC), pioneered the minicomputer revolution in the 1970s, is still fighting back from a series of poor results. Norsk Data, the wonder of Norway, lost money in 1988, some £70m, for the first time in 16 years. The shock triggered a dramatic strategic re-orientation, including the sacking of 800 workers.

Wang, a high flyer in the early 1980s, is making a fitful recovery from losses in 1987 and analysts are pessimistic about its prospects for 1989.

The mainframe sector has seen some of the most serious developments. Control Data, one of the "Bunch" group of manufacturers who were IBM's only serious competition a decade ago, is in trouble. Both its mainframe and supercomputer business are losing money and market share, and it narrowly avoided a technical default on a $100m credit line by turning in a slim profit for 1988.

Analysts are arguing that it would be better now to break the company up than turn it around.

Honeywell, another Bunch member and one of the oldest names in computing, finally bowed out of the business at the end of 1988 leaving Groupe Bull of France as majority shareholder in Honeywell Bull, renamed Bull HN early in 1989.

The new company, while shedding 1,600 administrative staff to improve productivity, has the uphill task of persuading its customers that "Bull" can convey same charisma in the US as "Honeywell" – "ImpossiBull," some might say.

However, companies well-tuned to the turbuleuce of today's computer market have been turning in some sparkling performances. Compaq, uow second only to IBM as a manufacturer of professional personal computers, reached $2bn in reveuues faster than any company in history.

Sun Microsystems, which dominates the market for scientific and engineering workstations grew at an even faster rate and has announced it is planning to enter the general purpose personal computer market.

Apple Compnter, despite a blip in profits caused, apparently, by overstocking on memory chips when scarcity had forced up the price, coutinued to prove that its "Macintosh" technology was viable in a world dominated by IBM personal computers.

Digital Equipmeut, whose excellent growth in recent years has been based ou a product line well aligned with its customer's requirements for compact compnter systems that can easily be enhanced or upgraded, continued to shine and made powerful progress in bringing down the cost of its technology.

Its latest VAX 6300 line, announced last month, gives a price/performance of less than $30,000 for each 'millions of instructions per second' (or *mips)* of power, an improvement over the preceding ranges of between 30 per ceut and 60 per cent.

Both Tandem Computer and Stratus Computer, specialists in fault-tolerant computing and on-line transaction processing, showed strong growth despite their powerful involvemeut in the financial services marketplace where there has been a general slow-down in the purchase of information technology equipment.

IBM, the *world's leading* computer manufacturer and the dominant force in mainframes, showed that it had started to correct the weaknesses in its product line which have badly affected its market share, especially in the mid-range, and its share price, over the past few years.

Its AS/400 midrange compnter, the key to its plans to create compatible families of computers from PCs to mainframes, seems to be proving a success. Available in volume only since August last year, it has already shipped some 30,000 machines at a price between $100,000 and $200,000 per system.

Furthermore, its plans to cut operating costs are bearing fruit. Some 6,500 people have already resigned under a special voluntary redundancy programme, far in excess of the 3,000 to 4,000 it had expected.

Established vendors turned *to new outlets to increase* reveuues. For examaple, Honeywell Bull in the UK started "Honeywell Express" two years ago – a mail and telephone order volume business for computer consumables and the like. Now it is doing business worth £2m a month, according to Mr Brian Long, the group's managing director in the UK.

Philips Business Systems, again in the UK, moved into the third party maintenance business.

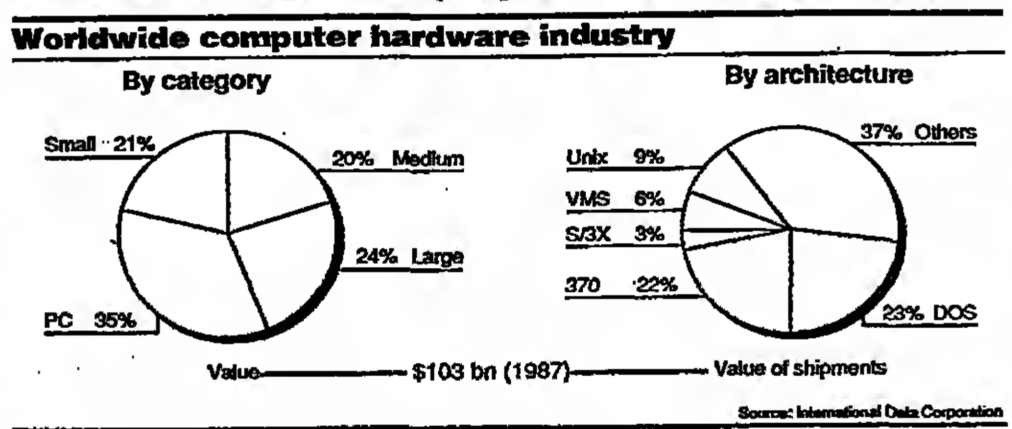
Two forces, in particular, seem to be at the heart of the varied performauces seen across the industry:

■ First, the move to "downsizing" - replacing expensive systems with smaller, cheaper systems based ou the latest and most powerful microprocessors - seems to be advancing rapidly.

■ Second, the industry's customers are making their real

Continued on Page 3

Worldwide computer hardware industry



Source: International Data Corporation

ATTENTION ALL *Capt'ns* OF INDUSTRY

LATELY have you had the *creeping* suspicion that your *Endeavour* has not been PROCEEDING on a *True* and *Vigorous* course? That your competitors are perhaps INCHING ahead in the race for *Greater Profitability.* Then, more than likely, your computer system is operating at less than FULL efficiency. Our advice – *whistle* Hoskyns aboard.

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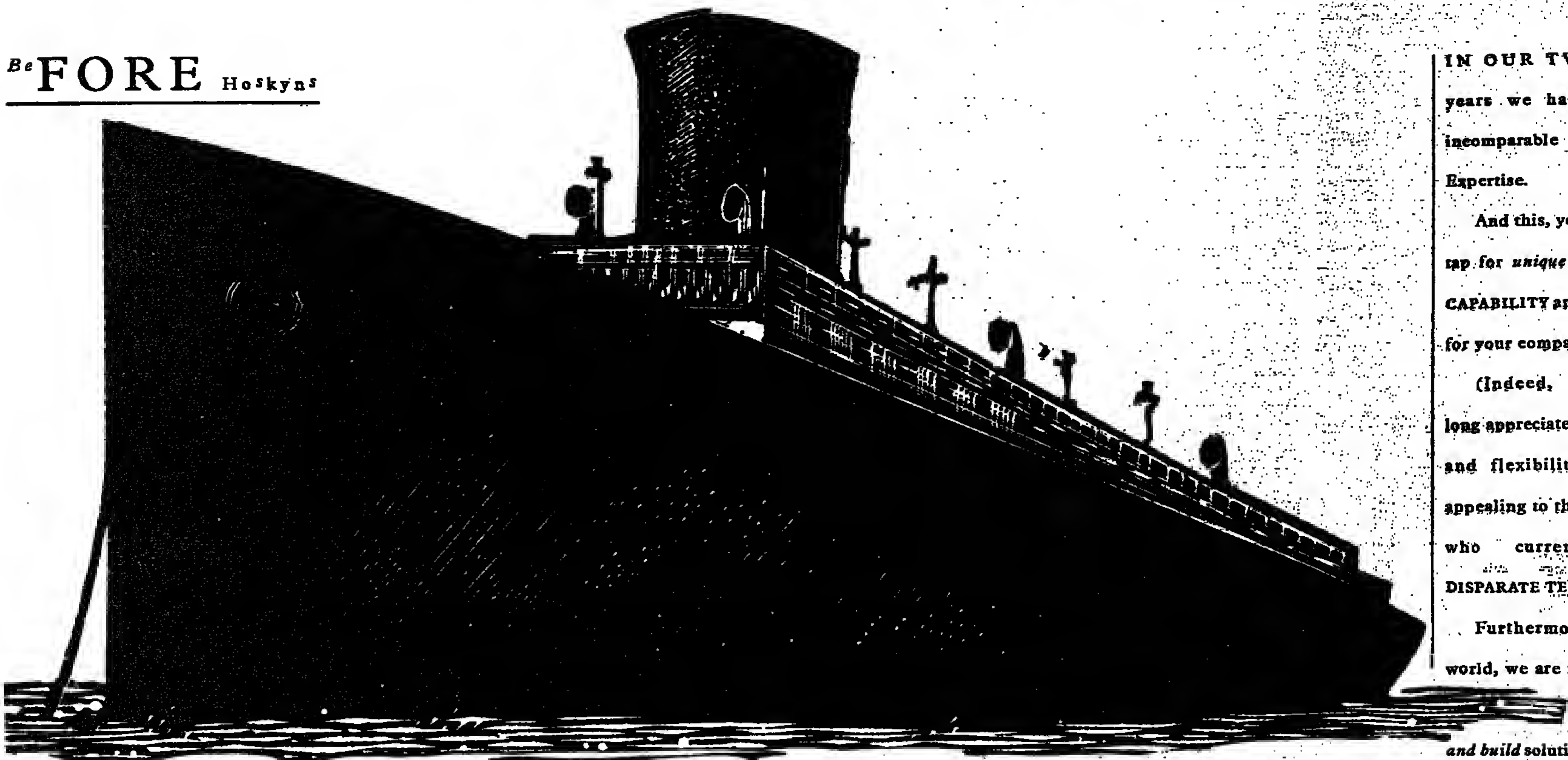

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Together we can make computers make money

The 1992 EC programme could bring a wave of mergers, says **Terry Dodsworth**, Industrial Editor

European suppliers braced for big changes

IF THE objectives of Europe's ambitious plans for market integration in 1992 are met, the computer industry stands to be affected more than most other manufacturing sectors.

One reason for this exposure to the forces unleashed by the 1992 programme is the expected change in the customer base of the computer suppliers.

A wave of mergers and rationalisation is expected across the European Community. This will bring in its train a similar demand for a streamlining of computer manufacturers. As user companies concentrate their data processing orders on fewer manufacturers, the computer producers will also be required to become more international in their approach.

At the same time, computer producers can expect a shift in the ordering pattern of public sector customers, currently one of their major markets. A large proportion of Government contracts are channelled today into local computer manufacturing businesses – either national champions that have been deliberately sponsored by governments as a means of developing high technology industry, or US companies that provida jobs and imported technology. But by 1992, this local advantage is supposed to disappear.

Virtually no-one believes that this planned change in the market will occur overnight, and there is a great deal of scepticism about the willingness of several European governments to change deeply engrained habits of national procurement.

Nevertheless, the computer companies are having to plan for a situation in which they no longer have assured domestic markets, and where competitive bidding is likely to be more intensive than in the past. In short, they now need to have a strategy for Europe as a whole.

Three main points have emerged up to now in this trend towards European integration.

First, many of the big American companies are already well organised on a pan-European basis, easily outstripping the ability of their European competitors to provide cross-frontier services. All of the top four US groups in Europe – International Business Machines, Digital Equipment, Unisys and Hewlett-Packard – have well-established roots in the main markets,

This phenomenon derives partly from the way US companies have tended to tackle Europe as e single, continental sales area. Coming from the US, where they are used to marketing on e continental scale, they have found it easier to jump frontiers than most of their local rivals.

At the same time they have had more financial and technological muscle than many European companies, helping them to carry the heavy cost of overseas expansion.

Second, a few European leaders are now beginning to move beyond their own national baliwicks: Siemens, the largest of the indigenons European groups, for example, has established a strong presence in Italy, and has begun to invest heavily in both the UK and France – in the latter market it recently acquired IN2, an information technology group.

Similarly, Olivatti, the second largest of tha Europeans, has been pushing overseas, partly by acquisitions such as the Triumph Adler purchase in West Germany, and partly by organic growth, based upon its range of office equipment.

Bull, the French State-owned group, has also established a relatively broadly-based European presence through its emergence in the lead role at the former Honeywell Bull group. This shift of control means that Bull will now have a significant presence in markets such as Britain, a traditional Honeywell stronghold.

In the personal compnter sector, the last few years have also seen the development of Amstrad, the UK supplier of cheaply-priced IBM compatible machines, as a pan-European organisation. Amstrad is still in the early stages of this expansion, but its aim is to establish a group that can sell a consistent product line across Europe, based on a common operating system.

Third, Europe is moving with increasing rapidity towards common standards in key features of computing, a process which is making it easier for companies to move into new markets from a technological point of view.

The push towards common standards is coming from a variety of directions. It partly derives from political considerations – the feeling in government that European companies cannot stand up to the might of IBM, the world's leading computer company, if they continue to fragment the market by selling products with e variety of operating systems.

At the same time, more and more users – particularly governments – are demanding standardised prodncts. As compnting spreads further into the day-to-day operations of business and administration, common standards mean reduced costs – the same software can be used throughout the organisation – more flexihility, because nsers will not he locked into one type of computer, and easier communications between computers – an increasing demand with the development of networks of interconnecting machines.

The shift towards open standards and the growing importance of departmental data processing are two factors which have been favouring European computer mannfacturers over the last few years.

Although the Americans have strong players such as Digital Equipment and Hewlett-Packard in this sector, IBM has not yet been able to transfer its overwhelming strength in large mainframe computers into the market for mid-range machines. Hence the Europeans have been gaining market share.

According to the Datamation trade magazine, European-owned companies accounted for 46 per cent of the revenues of the top 25 computer companies in the region in 1987, the last year for which it has figures. This compared to 40 per cent in the previous year, and 36.6 per cent in 1985. IBM's sales, hy contrast, slipped to 32.5 per cent in 1987 against 42 per cent in 1984.

While these figures underscore the way the indigenous European producers have seized the opportunities presented by the growth of departmental computing, these companies are hy no means certain of maintaining this new-found growth. Among the challenges are:

■ American companies are beginning to hit back. All the big computer groups, including Unisys and IBM, have now moved to accommodate the European drive for common standards, and are now coming up with their own Unix offerings.

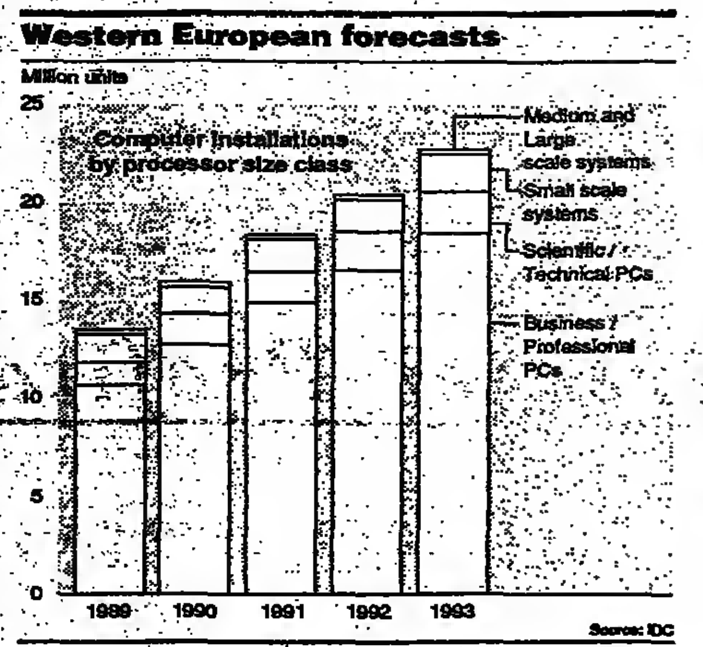
■ New competitors have emerged from the US in departmental computing with the extraordinarily rapid growth of workstation producers such as Sun and Apollo.

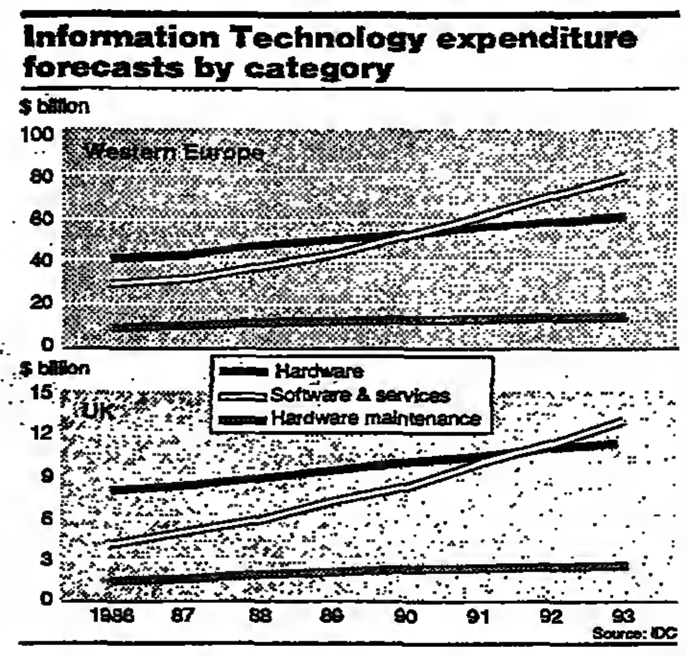
■ Above all, how will the indigenous computer groups go about the tricky business of establisbing pan-European organisations? Market integration in 1992 will force home this issue because of the effect it is likely to have on the corporate clients of the computer manufacturers.

It is now widely expected that these customers will go through a period of international reorganisation that will involve a wave of takeovers and mergers. Rationalisation will inevitably mean an effort to impose uniformity on the data processing departments of these enlarged groups, a process that will mean the loss of clients in some cases, but the opportunity to follow their customers into new geographical markets.

The computer groups, therefore, will have to try and establish pan-European organisations of their own. Organic growth may play a part in this, and companies are also thinking of more joint ventures and alliances.

But the soake-out could also lead to a series of mergers and alliances to enable producers to fill out both their product lines and their market positions. This is why the industry is now watching to see how the big companies – Siemens, Nixdorf, Bull, Olivetti and ICL – play their hands.





THE TOP TEN EARNERS

☐ **The top ten European revenue-earners for information systems in 1987, (with total worldwide IS revenues in brackets); values expressed in $m.**

1. IBM, $18,332.5 (*total:* $50,485.7).
2. Siemens AG, $4,961.6 ($5,703)
3. Olivetti, $3,802.5 ($4,637.2)
4. Digital Equipment Corp., $3,533 ($10,391.3)
5. Nixdorf Computer, $2,652.2 ($2,821)
6. Groupe Bull, $2,345.8 ($3,007.5)
7. Unisys, $2,272.9 ($8,742)
8. Phillips, $2,055 (2,601.6)
9. Hewlett-Packard, $1,800 ($5,000)
10. STC, $1,720.4 (2,123.9)

Source: Datamation, 1988

Louise Kehoe highlights new trends in the US market

The year of the computer network

IN THE United States' computer market, 1989 is the year of the computer network. The redistribution of networked computer power throughout many businesses is a trend that is sweeping through the computer industry, creating new opportunities and challenges.

The traditional segmentation of the computer industry into personal, mini and mainframe computers is being fractured by new technology as powerful desk-top computers challenge the performance of minicomputers and even mainframes.

Networked personal computers are proliferating in large corporations, typically replacing terminals linked to minicomputers and mainframes. In some cases, personal computers are replacing departmental or work-group minicomputers, and desktop computers are also being used to communicate with remote corporate data centres.

This new style of computing, often called 'client server' systems, involves moving away from the traditional distributed computer network – controlled by a central 'host' computer – toward a network in which computing power, data storage and peripherals are shared by all users.

One of the most important requirements of such systems is compatibility between all of the computers on the network. The ability to switch data from one type of computer to another without loosing functionality or doing a lot of translation is becoming essential.

The 'open systems' movement, has created widespread collaboration in the US computer industry as hardware and software developers strive to find common standards. It is also, however, at the root of a major industry split over the future direction of the UNIX operating system.

Lined up behind IBM, with its version of UNIX, are Hewlett-Packard, Digital Equipment and a growing number of computer and software companies.

Also building a powerbase is the AT&T led Unix International group. With no sign of any reconciliation of this row, analysts predict that two 'standards' will emerge making it more difficult for computer users to implement true 'open systems.'

The explosion in computer networking will create a $4.8bn market for local area network companies by 1991, according to analysts at Dataquest, the market research group. They see sales of the equipment and software needed to tie computers together rising at the rate of about 25 per cent per year.

The dominant role of the personal computer in the trend toward networked computing is demonstrated by the increasingly large proportion of industry revenues that it represents. Last year, according to Dataquest, US personal computer sales totalled $22.4bn, or close to 40 percent of all computer system sales.

The spectacular growth of personal computer sales, which ran at about 30 percent last year, is beginning to slow down, say some market analysts. This year, sales are expected to grow by about 13 per cent in the US, with the average growth rate over the next five years pegged at about six per cent.

Because personal computers represent the largest sector of the compnter business, any slowdown will be reflected in industry growth rates. Dataquest predicts that US computer system sales will grow at an average rate of 7.2 per cent over the next five years to total $83.8 bn in 1992.

The overall figures mask what is expected to be continuing spectacular growth in the computer workstation sector. These are desk-top computers that are capable of performing sophisticated computer aided design, engineering or analysis tasks. Sales will rocket from a 1988 total of $1.9bn to over $4.8 bn in 1992, the market analysts predict. This averages to an annual growth rate of 30 per cent.

As the performance of personal computers continues to improve, and prices of low-end workstations come down, it is becoming increasingly difficult to differentiate between these two product categories.

Indeed, workstation manufacturers such as Sun Microsystems are expected to begin to encroach upon the markets of major PC-makers this year.

While the personal computer and workstation manufacturers have been the primary beneficiaries of the trend toward networked computing, traditional minicomputer manufacturers have seen their market growth slow down.

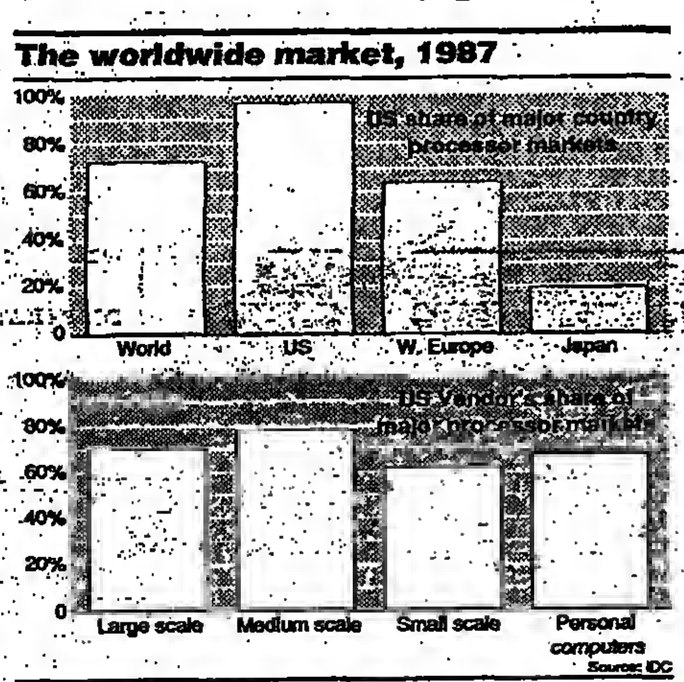
In the minicomputer sector, which covers a broad class of workgroup and corporate departmental computers, as well as the machines used as central computing resource for many medium-sized businesses, will grow by approximately six per cent per year, the analysts predict.

Mainframe computers, far from being the dinosaurs, still represent about 25 percent of total computer revenues in the US. With anticipated growth at a modest 4 per cent per year, however, the infinence of the mainframe on the overall market is gradually diminishing.

Driving demand for higher performance computers at every level is the widespread use of computer graphics

In 1988, US sales of computer systems and software used in computer graphics systems totalled $9.1bn, according to market analysts.

At the very top of the performance scale in computing, there has been a proliferation of new approaches to 'supercompnting' with the emergence of two new important classes of computers known as mini-supercomputers and parallel mini-supercomputers.



BOOST FOR GRAPHICS: In computer-aided design applications, the Compaq advanced graphics board, number 1024, provides five times the performance on advanced graphics for faster pans, zooms and re-draws and facilities for reducing eye fatigue.

The US market

■ The US computer market in 1988 (with forecasts for 1992 in brackets), expressed in $m.

☐ Total computer systems, 57,161.8 (77,528.3)
☐ Corporate resource computers, 14,346.3 (17,702.7)
☐ Business unit computers, 5,124.3 (8,140.3)
☐ Large department computers, 4,708.7 (6,504.5)
☐ Small department computers, 3,950.3 (5,233.6)
☐ Work group computers, 4,668.2 (5,937.2)
☐ Singla user enhanced computers, 1,944 (4,834)
☐ Personal computers, 22,420.0 (29,176.0)

Source: Dataquest, 1989.

Shake-out now well under way

Continued from Page 1

requirements known through an unprecedented combination of lobbying and budget power and the speed with which this has had an effect on contracts and orders has caught a number of companies on the hop.

Norsk Data was hit by both trends. It failed to move quickly enough away from its own proprietary technology to systems built from the new microprocessor chips and it failed to realise how rapidly its major customers in government and defence would demand "Unix" operating system capabilities as a pre-requisite for bidding for major contracts.

Unix, developed by AT&T is seen today as the best prospect for the basis of an industry wide common operating system for small and medium sized computers.

In retrospect, it is easy to see why Norsk Data fell into the trap. Three years ago, it could hardly keep up with demand for its proprietary technology and to have changed to a different set of processor chips and to an operating system that had littla commercial acceptance must then have seemed foolhardy.

Hewlett Packard, tha US minicomputer manufacturer, however, grasped that particular nettle with apparent success.

In the early 1980s, it took the enormous gamble of redesigning its entire product line around a new kind of computer architecture - reduced instruction set computing, or Risc – which played off simplicity in the processing hardware against complexity in the software. It shipped its first Risc machine in November 1986.

Last year, its volume of orders grew some 20 per cent, the strongest since 1984. Orders for the new design of computers running HP's version of Unix exceeded expectations, a highly satisfied John Young, chief executive, reported.

Looked at from the outside, the computer industry over the past couple of years must have seemed a confusion of conspiracies, alliances, and agreements, especially in the standards arena. Much to the fury of its customers, the industry seems to be settling for two standard versions of Unix, one from the Open Software Foundation (IBM and friends), and one from *Unix International* (AT&T and friends).

It also seems to be settling for three personal computer design standards - industry standard architectnre, extended industry standard architecture (Compaq and friends) and microchannel architecture (IBM).

But the most interesting standards battle of all will hot up significantly this year as IBM reveals more of its secret weapon for the future of computing – Systems Applications Architecture (SAA) – in its bid to unite its PCs, *medium-range and mainframe* computers through one common design.

If it is successful, the rest of the computing industry will have to follow its lead and IBM will have secured its dominance into the 21st century.

JAPANESE MANUFACTURERS

System compatability is a key issue

THE Japanese Government's recent decision to make Open System Interface (OSI) the standard for government information systems has provided a welcome boost to OSI's position as the leading international standard for interfacing computers of different makes.

The move affects computer-related government purchases worth around 100 billion yen per year, and follows similar announcements by Britain and Canada in 1986 and 1987, respectively.

The decision was backed up by the Ministry of International Trade and Industry's Patent Office, which ruled that from autumn 1990 all patent applications related to electronic information devices must feature compliance with OSI.

Compatibility issues were also on the minds of such Japanese companies as Ricoh, Fuji Xerox and Omron Tateisi Electronics, which recently were among 13 Japanese, US and European firms to newly join the AT&T-led 'Unix System 5' group.

This now brings to 45 the number of companies backing AT&T in its rivalry with IBM over the standardisation of the popular Unix computer operating system.

Already, Japan's two leading manufacturers of IBM-compatible computers, Hitachi and Fujitsu, have ended up in different camps.

Hitachi, citing reasons of greater potential policy flexibility, is backing IBM's Open Software Foundation (OSF) group (which now boasts 85 firms and universities under its wing), while Fujitsu is keeping company with other leading Japanese companies – NEC, Toshiba and Oki – in the Unix International camp.

Another reason Hitachi plumped for OSF was its belief that this will prove advantageous within the office work station market, currently one of the fastest-growing areas of the computer business.

Work stations, more powerful than PCs, and one stage below mini-supercomputers, are increasingly in demand among financial analysts and desk-top publishers in Japan.

Previously, engineers were the key customers, but the growth of new, potentially huge, market sectors has led most Japanese computer firms to invest heavily in catching up with the US in the field.

In August, last year, Fujitsu tied up with industry leader Sun Microsystems of California to sell Sun work stations under its own name.

Previously, Nippon Steel, Toshiba and several other Japanese firms had tied up with Sun, reflecting the technical catch-up distance which remains in the sector.

The Japanese companies main current aim seems to be to develop less expensive workstations which will be accessible to the office sector.

There is also competition developing with top-end machines of the conventional PC sector. Toshiba, for example, describes its 32-bit laptop as a 'personal work station'.

Japanese demand for workstations is expected to at least double within the year. During 1988, sales in the engineering sector reached Y75bn.

In the personal computer sector, strong domestic sales caused the Japan Electronics Industry Development Association to raise its forecast for domestic machine sales in this financial year from Y620bn to Y650bn.

Overall foreign and domestic PC sales rose 20 per cent in the last quarter, with unit sales of 605,000.

NEC still reigns supreme in personal computers in Japan, holding over 70% of the domestic market. This situation has spurred rival firms such as Sharp, Mitsubishi Electric and Sony (and around 300 other companies) to strongly promote the 'AX', a newly-developed personal computer, compatible with IBM's top-selling 16-bit PC/AT model.

Last December, at an AX Convention in Tokyo, these suppliers showed off an impressive array of products which promise to pose a serious challenge to NEC's dominance. These included a large-capacity floppy disk offering 20 times the capacity of conventional units.

So far, however, sales have been largely confined to users planning to take advantage of sophisticated CAD softwares written for the PC/AT. Fujitsu is challenging NEC through the 32-bit market, and is expected to launch the first 32-bit machine priced at under 400,000 yen on the domestic market, this spring.

At the other end of the scale, supercomputers are becoming an increasingly important and dynamic market sector. Prestige is also involved in the development of these phenomenally fast, high-capacity units, but even beyond that, issues of basic strategic capability, on an international scale, have become focussed in this sector.

□□□

In no other area is the critical importance of expertise in semiconductor production so clearly defined, and the Japanese makers – currently confined to Fujitsu, NEC and Hitachi – are confident that their superiority in this area will allow them to compete effectively against the United States' acknowledged lead in software.

Fujitsu is the market leader among Japanese companies, having sold 76 of its VP-series machines (18 of them overseas), which compares with the 23 unit sales of NEC's SX-A series.

In December last year, Fujitsu announced what it says is the world's fastest supercomputer, featuring a claimed maximum calculation speed of 4bn floating-point operations (flops) per second, to be marketed at the end of 1990 or later.

Although this operating speed is eight times faster than the top-end unit of US firm Cray Research, analysts point out that the Fujitsu machine, the VP-2000, employs only two processors, while Cray's Y-MP unit features eight working simultaneously.

This nicely illustrates the different strengths of the US and Japanese manufacturers. America has a lead in efficient system design and software skills, essential in parallel processing, while the Japanese rely on super-fast circuitry combined in 'vector processors,' which break up computing operations into like-tasks, i.e. multiplication, division and so, to achieve the massive number-crunching process.

□□□

To add to their competitiveness, Fujitsu and NEC are already working on designs that will allow UNIX programs to run on their machines, and with supercomputer applications growing all the time, in such areas as vehicle design, structural analysis of buildings and astronomy, Japanese investment in the sector seems certain to grow.

The joker in the pack, however, is IBM, whose early moves into the supercomputer field have worried the Japanese, who recognise the giant company's strengths in both software and component manufacture.

Looking to the future, a special committee under MITI will soon start co-ordination of a basic research programme to study the development of computers, based on such advanced technologies as neuro, bio and fuzzy-type devices. The Laboratory for International Fuzzy Engineering Research (LIFE) will open in March, with an initial seed budget of around Y22m.

Roy Garner in Tokyo

SUPERCOMPUTERS

US circuitry tests mark milestone development

CRAY RESEARCH, the Minnesota-based manufacturer of the world's most powerful computers, will next month begin testing the circuitry of its latest and most innovative machine.

The launch of the Cray 3, planned for the end of 1989 but already about a year behind schedule, will be a milestone in supercomputer development. It will be the world's first computer to use processors fabricated in gallium arsenide, a material which allows computing operations to take place three times faster than in silicon, the semiconductor at the heart of virtually all today's computer chips.

There were a number of reasons for the delay, Mr Neil Davenport, the British-born manager of Cray's Colorado Springs manufacturing facility, said earlier this month.

First, the development programme had been seriously disrupted by the decision to relocate manufacturing to Colorado from Minnesota (Cray bought the facility from Inmos, the troubled transputer manufacturer).

Second, there had been the perhaps inevitable difficulties in designing novel circuits in a new and uncompromising material. The circuits to be tested next month will be the fourth revision. Features which are being built into the latest versions include resistance to electrical interference and static discharges.

Mr Davenport points out that there will be 400 different circuit types in the Cray 3. It takes six weeks to redesign, manufacture and test a faulty circuit. As a consequence, the Colorado team believes it has progressed faster than it could have hoped for; if the tests go well it will build a four-processor system by the late summer and two full-scale prototypes in December. Customer shipments should begin in early 1990.

In the meantime, its older technology Y-MP and Cray 2 supercomputers continue to sell well. Sales figures for the final quarter of 1988 were outstanding – $330m out of a total for the year of $756.3.

Nevertheless, the analysts are cautious, even pessimistic. Daniel Benton at US stockbrokers, Goldman Sachs noted, for example: "We cannot forecast 1990 earnings with a high degree of certainty until a successful launch of the Cray 3 is guaranteed. We believe this will take at least nine months and as much as 18 months to be determined".

Their caution stems from the fact that the world of supercomputers is small and prey to technological trauma and commercial perturbations. The market could be worth $20bn by 1991 but supercomputers are still used almost exclusively for scientific research and related activities where processing power is at a premium. Weather forecasting, engineering design and oil exploration are typical examples.

Processors made of gallium arsenide allow computer operations which are three times faster than those in silicon chips

A major development in recent years has been the trend to 'visualisation,' to building a visual representation of a physical process on the computer screen.

Mr John Rollwagen chairman of Cray Research says the quality of these images will soon surpass attempts to observe the physical process directly, opening a whole new kit of research tools for scientists and engineers – they will be able effectively, to interact with three dimentional simulation models on the screen in front of them.

Supercomputers of this quality are expensive – total sales in Europe are typically less than a dozen a year.

There are really only five companies building supercomputers proper, that is single or multiple processor machines costing between $2.5m and $20m – Cray and Control Data in the West and Fujitsu, Hitachi and NEC in Japan. Cray reckons to have 64 per cent of the world market; if Japan is excluded, the figure goes up to 80 per cent.

Control Data, which built the world's first supercomputers while Seymour Cray was chief designer, has been having a difficult time recently. It problems are the result of a lack of business focus and unwise diversification but its supercomputer division is still a worry. The hardware is first rate – the UK's weather forecasting headquarters is a customer for its ETA family of machines – but it has been dogged by troublesome software.

It lost $12.8m in the last quarter of 1988 and scarcely made a profit for the whole year. It hopes to sell $150m worth of supercomputers, but barely reached $80m. The results from the ETA division were attributed by Mr Robert Price, CDC chairman, to "a lack of maturity in operating system software". There is a major difference between the computers built by Cray and Control Data and those built by Japanese companies. The US machines are multi-processor, typically combining the power of four, eight or sixteen separate processors to run programs while the Japanese machines are single processor engines, which nevertheless run at remarkable speeds.

A single processor Hitachi S-820/80 can carry out 3,000m floating point calculations a second (3-gigaflops) compared with 3.8 gigaflops from the eight-processor Cray Y-MP.

A major change in recent years has been the emergence of companies offering what are known as "mini-supercomputers," machines which exploit the power of modern microprocessor chips and sophisticated software techniques to give a fraction of the power of a Cray at a much smaller fraction of the price.

IBM has never really competed in the true supercomputer marketplace. Cray and CDC say they are seeing some competition at the lower end of their ranges from IBM's 3090 VFP, basically a large 3090 mainframe fitted with a vector processor to give added speed in scientific computations, but the results of IBM's own supercomputing research programme have yet to reach the marketplace.

The essential difference between a commercial mainframe and a supercomputer is tuning. The supercomputer is tuned to carry out one computing task as quickly as possible. The commercial machine has to deal cost-effectively with a batch of very different kinds of tasks.

Even the esoteric world of supercomputing has been affected by the world-wide drive towards standards. Cray, for example, has developed a version of Unix – the operating system written at AT&T for medium-sized Digital Equipment computers for its machines.

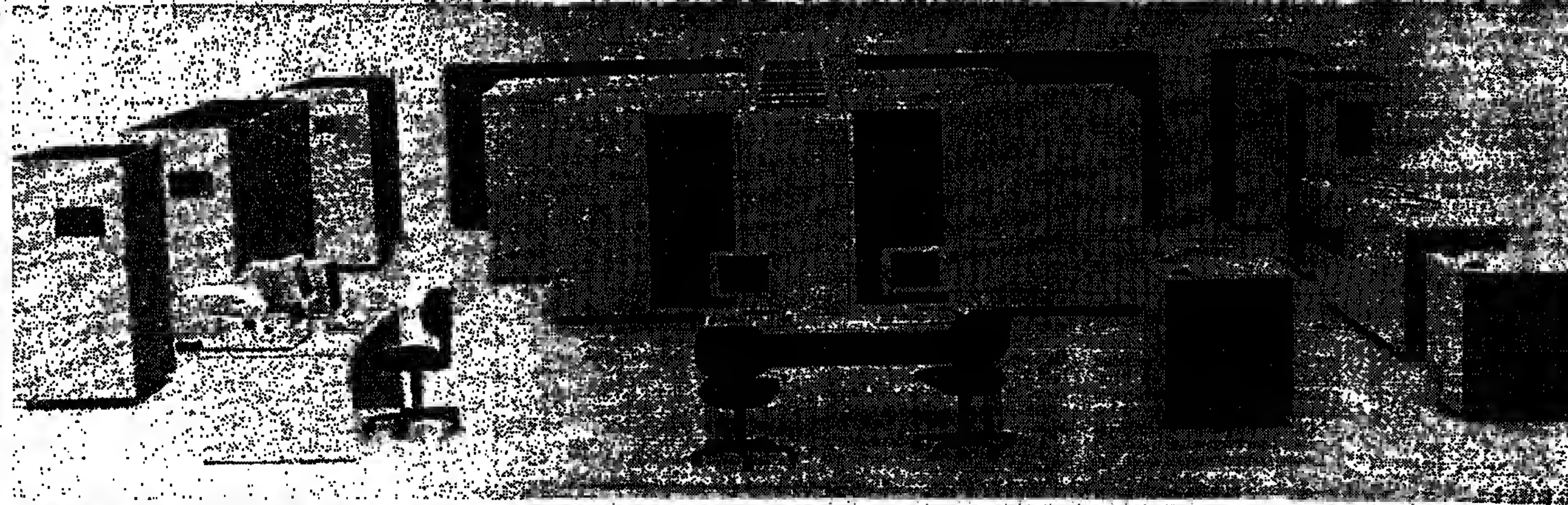
The idea is that computer users will be able to control the system using the familiar Unix commands and calling on the power of the supercomputer, when necessary.

Control Data is following suit offering what it calls the "transparent computing environment" so that its machines can be more easily attached to those of other manufacturers. It also says it will offer Unix on its Cyber mainframes at the end of the year.

Alan Cane

MAINFRAMES

A radical shift in traditional markets



Large mainframes like this are used in the banking, insurance and finance sectors, as well as in scientific areas involving great volumes of data processing. For example, the Joint European Torus project at Culham in Oxfordshire — a major scientific fusion experiment — relies on an IBM 3090 mainframe, illustrated here.

THE MAINFRAME computer industry has come under relentless financial and industrial pressure since the mid-1980s.

Sales have continued to grow by about 5 per cent a year, roughly double the rate of inflation in the main industrial nations. But the manufacturers are being squeezed by rapidly-falling prices, inexorable demand for increased research and development spending as the product life-cycle decreases, and the continuing development of different forms of computing.

These changes in the market are best illustrated by the way that workstation manufacturers such as Sun and Apollo, or micro-computer producers like Apple and Compaq, have managed to capture the headlines.

These companies are in areas of data processing which are showing the fastest expansion at present — indeed, workstation manufacturers have been recording growth rates of 40 to 50 per cent — and they have been steadily eating into the predominant position of the mainframe manufacturers. Industry figures indicate that mainframe sales accounted for only about 38 per cent of total worldwide revenues from the sale of computer equipment in 1987.

Faced with these radical shifts in their traditional markets, the mainframe producers have been forced to remodel themselves. Indeed, the shape of the industry has changed radically in the 1980s, as companies have developed a variety of different formulae to cope with these new conditions.

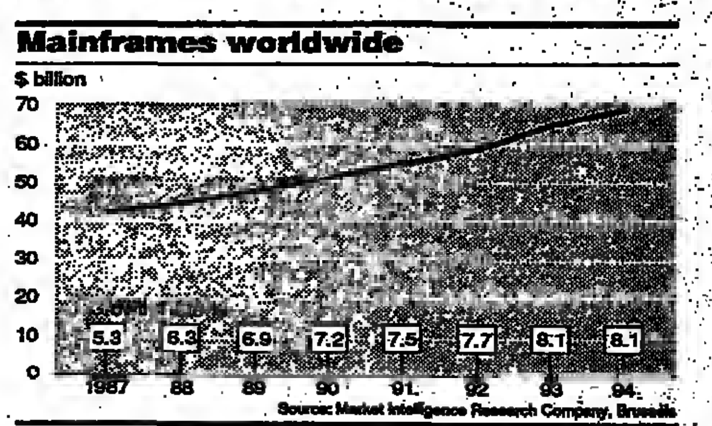
■ Several producers have either cut back radically on their involvement in the industry, or decided to specialise in particular areas.

Control Data of Minneapolis, for example, has streamlined its operations after a financial crisis, and Honeywell, another of the large Minneapolis-based groups, has now decided to concentrate on defence and factory automation, thus allowing Bull, the French company, to take the lead role in their long-established partnership.

■ Restructuring has begun with the merger of Burroughs and Sperry to create Unisys, now ranked about equal second in the worldwide industry alongside Digital Equipment. This move is expected to be followed by other takeovers and amalgamations, both in the US and Western Europe, where the lowering of trade barriers in 1992 will open up a variety of new possibilities.

A number of mainframe suppliers are re-focusing their operations

■ All the big mainframe vendors have developed broader product lines to cover other parts of the market as well. IBM, for instance, now has a comprehensive range of machines, from central mainframes to departmental computers and desktop PCs, much of it working on the same operating software. Unisys offers similar coverage, and other manufacturers have embarked on technology-based alliances that enable them to fill in the gaps in their own product lines.



■ Some traditional mainframe producers have turned to alliances to help maintain their activity in this part of the market. ICL, for example, now maintains close technological co-operation with Fujitsu, the Japanese group; Siemens also has an arrangement with Fujitsu for its most powerful machines; and NEC, the leading Japanese electronics company, is part of the Bull-Honeywell combination.

■ Companies are refocusing their operations to give greater prominence to non-mainframe activities.

In Europe, for example, there has been a determined push into mid-range departmental computing based on the Unix operating system.

Both ICL in the UK and Siemens in West Germany have been prominent in this process, which they see as a vital element in their counter-attack against the dominance of the US companies and IBM in particular.

ICL, for example, is basing its drive into Continental European markets on this area of the computer business, arguing that the mainframe sector is both sluggish and hard to break into overseas because of customer loyalty to existing brands.

■ Most computer companies are aiming to generate an increasing amount of revenue from software and services activities. They see themselves more and more as systems integrators, companies that will take their own products and those of other manufacturers to link together into data processing networks.

Traditionally, this has been a fertile area of operation for independent consultants and software houses. But it is a natural business for big computer manufacturers to try and exploit, partly because mainframes still stand at the centre of most large computer systems, and partly because these companies can themselves supply a great range of the software. IBM, for example, now earns a third of its revenues from software.

■ In Europe, leasing companies and manufacturers of IBM compatible mainframe machines have made a strong challenge in the last two or three years to the big names in the industry. According to Datamation, the trade magazine, a third of all large systems acquired by European companies are financed by leases, and three leasing companies have broken into the list of top 25 suppliers — Inspectorate International in Switzerland, European Computer Systems of France, which is owned by the Societe Generale bank, and Econocom International in the Netherlands.

Big mainframe vendors have developed broader product lines

The success of the leasing groups underscores the way in which sales in the mainframe market are becoming increasingly a matter of prices rather than special features that any individual manufacturer can supply. The same point is corroborated by the buoyant growth shown recently by manufacturers of machines that are compatible with IBM's operating system — Amdahl in particular has experienced soaring revenues.

Underlying this trend towards commodity-type conditions in the mainframe market is the extraordinary progress that the semiconductor industry is continuing to make in chip performance. The price of the standard measure of computing power — millions of instructions per second — is falling precipitously in tandem with the developments in chip technology, opening up multiple options for the design of computer systems.

Unisys, for example, recently demonstrated what it called a desktop mainframe, a computer which sits on a desk in a normally heated room, but which has the characteristics of a mainframe machine. The Unisys model is still regarded as rather fanciful in the industry, but it indicates the way the industry is going.

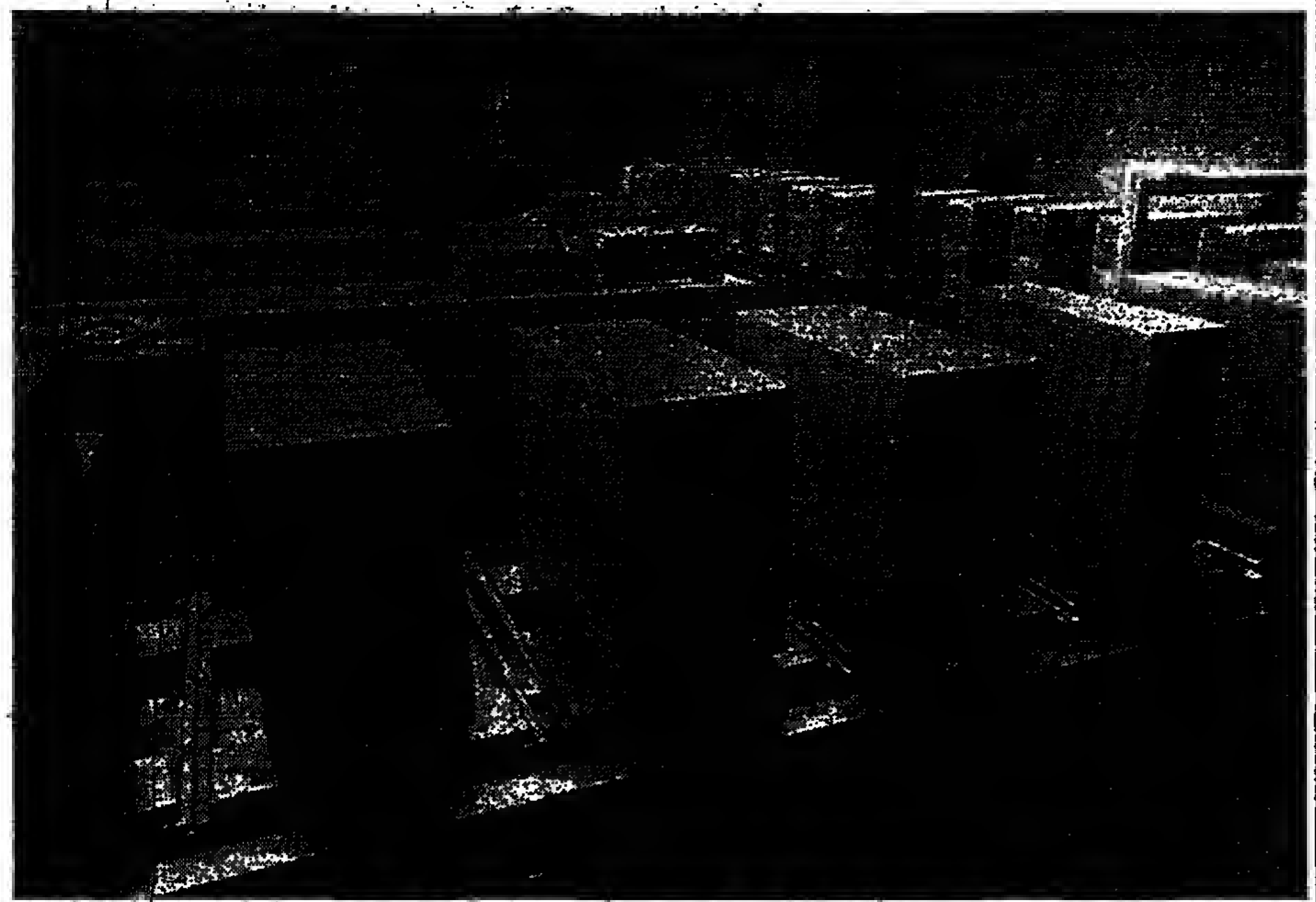
At the moment, the main inhibition on the development of data processing distributed around networks rather than converging back to centralised mainframes is the problem of handling data bases.

All the big computer groups are working on ways of solving this problem. When they do solve it, the industry may well complete its evolution from a mainframe-dominated environment to one where mainframes are just a minor element in a range of specialised machinery all connected together by complex, inter-related networks.

Terry Dodsworth

Industrial Editor

MID-RANGE COMPUTERS



A fully-automated assembly line for IBM's AS/400 range. These machines have been assembled and are then tested and packaged. Sales of this range have exceeded all forecasts, but IBM's success has made life more difficult for other minicomputer makers. Signs of stress are evident in some parts of the sector.

The industry's 'soft centre'

MID-RANGE computere represent what might be called the 'soft centre' of the computer industry. For most manufacturers, however, this has not been a sweet market over the past few years. Challenged at the low end by high performance personal computers and workstations, and squeezed out of high performance markets by new types of 'superminicomputers,' these traditional business workhorses are facing e serious slowdown.

The exception is IBM's latest AS/400 range, introduced last June, which has exceeded all sales forecasts. With this range of minicomputers, widely known as 'Silverlake,' IBM has sorted out e mid-range muddle of incompatible systems and significantly boosted its sales.

Recently IBM said that it had shipped 25,000 of its new AS/400 minicomputers by the end of November, confirming that the new range had made a fast start in shoring up IBM's previously weak position in the minicomputer market.

IBMs success has made life even more difficult for other minicomputer makers. Market growth for $20,000 to $1m minicomputers has slowed to about five or six per cent per a year from 15 per cent a few years ago.

The price and performance advantages that boosted minicomputer sales in the 1970s have been overwhelmed by less expensive microcomputer based systems in the 1980s. As the 1990s approach, minicomputer manufacturers are challenged to find a new role for their products.

The mid-range market squeeze has been a driving force in the trend towards open systems, says Louise Kehoe

Caught in the midst of this market squeeze are companies such as Data General, Prime, Hewlett-Packard and Wang. Digital Equipment, a leader in the minicomputer market, has thrived largely upon the weaknesses of IBM's mid-range products. Now it, too, is under pressure.

Signs of stress are clear throughout the minicomputer industry. Data General, which is estimated to hold a six per cent share of the US minicomputer market, laid off hundreds of workers last year and closed plants. The company reported losses of $19.5m for the quarter ending in December.

Wang Laboratories is *also* facing an earnings and revenue decline as it attempts to revamp its product line. The company reported earnings of only $1m the December quarter, down from $34 million in the same period of 1987.

Prime Computer is in the midst of a bitter battle to avoid a hostile takeover by MAI Basic Four. The company recently reported fourth-quarter losses of $14.4m, compared to profit of $21.3m in the same period of 1987.

The mid-range squeeze has also been a driving force in the trend toward 'open systems,' or the setting on industry standards that enable different brands of computers to share software and data.

This new style of computing replaces proprietary hardware and software with standard chips and programs.

AT&T's UNIX operating system has become the focus of a major *struggle* over *setting* software standards for the industry. The problems began on October 19, 1987, a date better remembered for the US stock market crash.

On thet day, AT&T announced plans to develop e new version of UNIX in a joint venture with Sun Microsystems. Few outside the industry even noticed the announcement until January 1988, when AT&T announced further plans to take an equity stake in Sun.

For major minicomputer manufacturers, however, the AT&T/Sun Microsystems alliance appeared to represent a major threat. Convinced that Sun, a highly successful computer workstation manufacturer, would gain a critical advantage through its role in developing the new version of UNIX, IBM, Digital Equipment, Hewlett-Packard and several other companies raised objections.

Months of industry debate failed to resolve differences over UNIX, and the industry remains split between two groups; IBM and the Open Software Foundation, versus AT&T and its supporters in UNIX International.

The industry division demonstrates just how serious the problem is for minicomputer manufacturers. As users demand compatibility between different brands of computers, the minicomputer-makers are being forced to radically overhaul their product lines. Most are already offering some form of UNIX compatibility, although they continue to support their own proprietary operating systems.

Another approach adopted by some minicomputer companies is to specialise. Prime Computer has focused its attention on the computer aided design market, while Wang hopes to revive its fortunes by specialising in image processing. Known primarily as e pioneer in the development of word processors and office automation systems, Wang is aiming to take a lead in what many believe will become e fast growing segment of the industry.

Unisys is using new technology to revive its mid-range products. Last month the company introduced a product that it called a 'desktop mainframe,' a machine that offers mainframe- like performance at prices beginning at $20,000.

Built around proprietary microprocessor chips, it represents the first of a new generation of computers, the company claims.

Digital Equipment has responded to IBM's challenge with a new line of mid-range computers called the VAX-6300 series, launched last month. The company claims that the new systems offer 35 percent better performance than its existing products introduced only nine months earlier, at only five per cent additional cost.

Like Unisys, Digital is relying upon advances in semiconductor technology to upgrade its products. The company says that it has achieved the increased computer speed by shrinking its microprocessor.

Hewlett-Packard has taken a radically different approach by revamping its entire computer product line with a new Reduced Instruction Set Computer (RISC) architecture.

Industry analysts expect the company to increase its minicomputer sales by 20 percent this year, far outstripping market growth.

Supercomputer for West German university

CONTROL DATA of Minneapolis has sold e liquid-nitrogen-cooled supercomputer to the University in Aachen, West Germany.

The $18m supercomputer, (model ETA10-G), designed and manufactured by ETA Systems, will have eix central processors end 128m words of shared memory and will run the EOS operating system.

The Aachen system is the second ETA supercomputer sold in West Germany — the first is installed at the German Weather Service.

ETA is a subsidiary of Control Data which had revenues of £3.4bn in 1987.

□ □ □

Expert system

LOGICA has been ewarded a contract by Citibank to build an expert system which will help to minimise the costs for maintenance end support *of Citibank'e CHAPS (Clearing* House Automated Payments System) specific software.

CHAPS provides e mechanism for the electronic transfer and same-day settlement of sterling payments between settlement banks in London.

The system consists of e network of gateway computers, running standard gatewey software, supplied by Logica. Each bank then has its own bank-specific software, which links the user interface to the gateway software.

Logica hes elso undertaken development work to enhance the CHAPS bank-specific software for the Bank of England.

□ □ □

Complex City network

IBM has completed one of the most complex and innovetive data-cabling projects ever undertaken in the City of London — a multi-million pound installation for the new Lloyd's building in Lime Street.

It is the first data cabling project using fibre optic materials that IBM has undertaken in Europe.

The work, which involved some 200 miles of cable and 12,400 data-connectors to allow full inter-connectivity across the 12 floors of the building, was completed within 18 months.

"This was achieved despite a huge constraint of heving to do most of the work outside normal office hours," says IBM (UK).

The company already supplies electronic networking services to Lloyd's and other members of the London insurance market.

□ □ □

3-D graphics system

HEWLETT-PACKARD has *introduced* an *entry-level* 3-D graphics workstation which it believes will set a new price-performance standard for the industry.

At £11,500, the HP9000, model 340-SRX eystem le claimed to be the first 3-D workstation evailable for less than £12,000.

□ Hewlett-Packard has applied to list its stock on four European stock exchanges — in London, Frankfurt, Paris end Zurich. If epproved by the respective exchanges, the stock lietings will take place during the fourth week of April.

Hewlett-Packard stock le listed currently on the New York and Tokyo stock exchanges.

□ □ □

Recovery services

CONTINGENCY PLANNING le a growth merket as more organisations become eware of their dependence on computer systems.

There le increasing realisation of the chaos that could erise if e computer system was shut down for even as short a period as two days.

The West European market for disaster recovery services rose by 30 per cent between 1987 and 1988, according to e report by analysts at Input. These contingency services brought in revenues of £92.5 in 1987, adde the report.

This year the Datashield division of Datasolve, one of Europe's leading providers of information menagement systems, anticipates growth of around 50 per cent in the sector.

Financial institutions are the main users of these contingency services, although the retail industry is increasingly seeking them.

□ □ □

New database system

A DATABASE system which can hold 4bn documents of any length with eny combination of text and image — and retrieve them at index epeede — has been unveiled by Realstream, e British computer-solutions company.

The Origin system combines the storage capability of optical disk technology, which allows for 1m A4 eingle-spaced eheets of text to be etored on each 12in. platter, with image processors, intelligent optical charecter readers and a mensgament softwere programme.

The syetem can be used to integrate archives, documents, drawings, word processing, epreadsheets and text into one effective menagement and erchiving tool, says Realstream of Dorchester.

□ □ □

New disk drive

NEC, the disk drive menufecturer, has launched e high capacity 5.25-inch half-height Winchester disk drive, offering an unformatted storege capacity of 180 *megabytes*.

WORKSTATIONS

Market volume doubles in a year

Expansion in this sector is impressive even within the standards of the computing industry, says Paul Abrahams

"WHEN YOU look back, it's been an interesting year for the workstation sector," says Alex Osadzinski et Sun Microsystems, the Californian computer manufacturer.

"It saw the introduction of the Open Software Foundation and the start of the whole Unix standards war. Uneventful, it certainly hasn't been."

The past year has also seen the doubling of the workstation market, in terms of volume. This is a continuation of the expansion of recent years — an expansion which has been impressive even within the standards of the computer industry.

Over the last seven years, the size of the market for workstations — high-performance personal computers, used principally by scientists and engineers — has averaged 100 per cent growth.

That level of increase looks set to continue into the future. Mr Russell Crabs, an analyst at the Soundview Financial Group, the Stamford, Connecticut-based affiliate of the Gartner Group, believes that 200,000 32-bit Unix and VMS machines were sold last year. He expects the market to grow by 70 per cent in 1989.

This sort of expansion has been assisted by rapid improvements in the size and power of workstations over the last few years. This, in turn, has created the possibility of a wide range of applications which need powerful processing and high quality graphics, including molecular modelling, computer-aided design and seismic analysis.

However, although the applications have been made available by the power of the machines, it has been the rapid fall in the price of that power that has created the new markets. The ratio between price and power has improved 70 to 100 per cent ove the last two years.

The number of new markets looks set to increase still further. Although the scientific demand for workstations still continues to expand, a number of companies are now hoping to exploit the power of graphics workstations by entering the commercial and financial field. Dataquest, the market research company, estimates that only five per cent of workstations are used for non-scientific applications.

A number of companies, such as Sun Microsystems and the Digital Equipment Corporation (Dec), believe that financial analysts will be able to understand complex data much more quickly and easily if the information is conveyed in colour graphics form.

Sun Microsystems has recently opened an office in the City of London which it hopes will serve as a point of entry into this, as yet, unexplored market.

As the market continues to expand, presenting, what Mr Osadzinski at Sun calls an "insurmountable opportunity," a number of companies have entered the market. At the high end of the market — using risc chip technology — are organisations such as Ardent Computer.

However, analysts believe that although the market may continue to expand in volume terms, a number of companies may fall by the wayside because of increasingly difficult conditions caused by competitive pricing.

For example, Mr Crabs believes that the average selling price of multiple risc chip-based machines could fall by 15 per cent per year over the next two years — a fall which could severely affect the profit margins of the companies involved.

Competition at the low end of the market also looks set to become more intense. The larger companies, such as Sun, Appolo, Dec, Hewlett-Packard and IBM are estimated to have 85 per cent of the workstation market between them, and are anxious to capture market share from the others.

"We have seen extremely aggressive marketing in the last two years," says Mr Osadzinski. "Each company has attempted to offer improved performance at increasingly low prices. That has affected margins."

He points out that 18 months ago a number of companies reduced the price of their products by as much as 40 per cent. The pressure on margins was exacerbated last year by the shortage of 1 Mbyte (1m bytes of information) dynamic ram memory chips. Sun was even forced to raise prices, which, he claims, caused a shock to the corporate system and hurt both dealers and salesforce.

According to Mr Crabs, another problem facing companies such as Appolo and Sun may be those commonly faced by concerns changing from high-margin, low-volume production and sales to high-volume, low margin. He believes that these companies will have to restructure in an attempt to deal with this change.

Moreover, the merging of increasingly powerful high-end PC market with the low-end workstation sector will accelerate the need to change.

"This sort of transformation can be extremely traumatic," says Mr Crabs. "It has all sorts of implications at every level of a company, ranging from production and quality control right through to distribution and servicing." He believes that Sun and Appolo will have to tread carefully as they make the transition. In particular, it will have an effect on their distribution channels as they switch from direct selling to dealers.

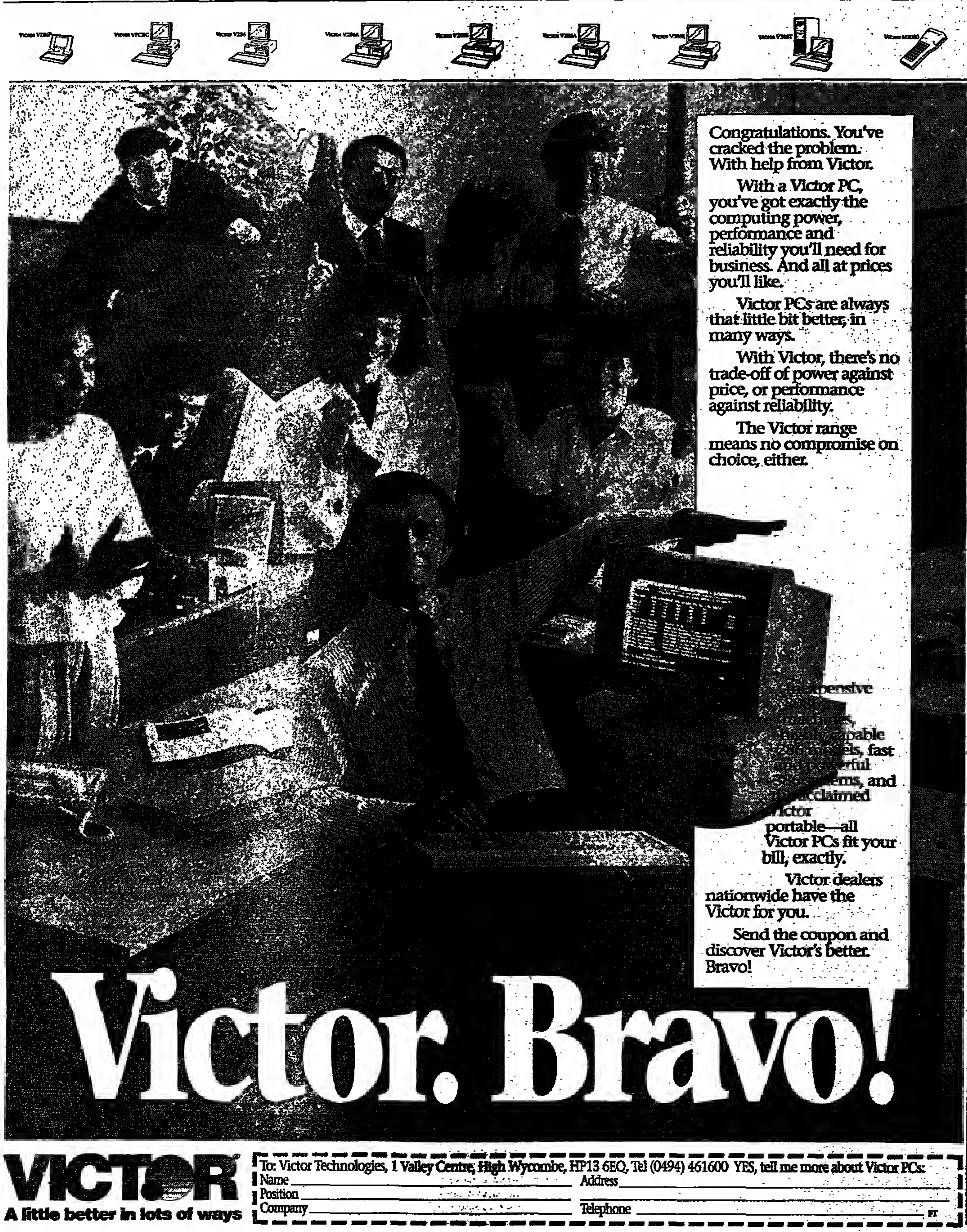
Although some of the margin lost to dealers could be absorbed by lower costs within the organisations' direct sales force, Crabs believes that the companies could be vulnerable to competition from more powerful competitors which would have the muscle to accommodate larger marketing and advertising budgets and assimilate greater investment in inventories.

Moreover, their situation could be further eroded if they attempt to maintain their margins through higher prices. There is a risk that customers would buy low specification products and then buy peripherals, such as memory chips and disk drives, from third party suppliers.

Apple Computer recently faced a similar problem with its Macintosh product and was forced to reduce prices after pushing them higher. Basic machines without peripherals have little margin built into them.

Osadzinski is convinced that there will be a few more entries into the market during the next two years before it begins to shake-out.

"There will undoubtedly be consolidation," he says. "The computer hardware industry will be like the automotive industry. At the moment, it's interesting to be the 13th largest computer company in the US. But it won't be, soon — there will only be a maximum of five or six top players. You're either worth $10bn, or you've been bought by someone."



OPERATING SYSTEMS

The debate intensifies

THE COMPUTER industry has received a lot of adverse publicity during the last few months over its "Unix wars." Manufacturers have divided into two warring camps, each putting forward a different version of the Unix operating system as an industry-wide standard.

Large customers are becoming increasingly vociferous in their public condemnation of the manufacturers for failing to agree to develop one common open operating system for all computers.

"The confusion that this split is causing among users will slow down progress in the market place," says Mr Walter de Backer, informatics director of the European Commission. "We are of the opinion that the extra cost of working with different open systems environments should not be borne by the customer but by the industry."

The operating system is the software that computers need to regulate their internal workings and to run applications programs. Historically, each manufacturer has developed a proprietary operating system — and anyone who has made a large investment in, say, IBM or ICL computers, is, in effect locked into using that hardware and software which is compatible with it.

Adoption of a standard operating system by all manufacturers would enable users to make big savings. They could run their applications programs on any machine with the required memory and processing power, instead of being confined to a single vendor.

Open systems would greatly increase the level of competition throughout the computer industry, among hardware and software suppliers, with all the benefits that competition brings in terms of greater choice, lower prices and faster innovation. Of course, a standard operating system is only part of the total infrastructure required for open computing — computers must also, for example, have a common language for communicating with other computers — but it is the most important part and the most difficult to achieve.

For historical reasons, the only candidate for a standard operating system is Unix, first written in 1969 as a research tool for AT&T, the giant US telecommunications group. Over the last 15 years AT&T has licensed many universities and computer companies to use and adapt Unix, and more than a dozen variants of the system have evolved.

The issue in the Unix wars is how best to consolidate the different versions into a single standard.

The opposing camps are fairly evenly matched in terms of numbers of members. The first group, Unix International (UI), is led by AT&T itself and includes Amdahl, Control Data, *Fujitsu*, *ICL*, NEC, NCR, Olivetti, Prime, Sun, Toshiba and Unisys.

The second group is the Open Software Foundation; OSF members include the two giants of the computer industry, IBM and DEC, together with Apollo, Bull, Canon, Data General, Hewlett-Packard, Hitachi, Nixdorf, Norsk Data, Philips, Siemens, Texas Instruments and Wang.

In terms of total computer sales, OSF is far ahead of UI. But at present, US members sell more Unix systems than their OSF competitors. Because of this existing user base, UI emphasises the continuity of its approach.

In effect, the other UI companies are giving their approval to the Unix consolidation and development programme that AT&T was planning in any case. The next step in that programme will be the introduction this summer of Unix System V Release 4, which consolidates the three most important commercial variants (Xenix, Berkeley and System V).

So, while UI guides AT&T's Unix development work, it will not write any software itself. OSF, in contrast, has been set up as an independent software house, sponsored by its members. Its version of Unix, which will be based on IBM's AIX variant, is due out in the second half of 1989.

Needless to say, UI and OSF each claims that its unified version will be superior technically.

Although the rival camps spent much of last year discussing a possible merger, those talks have been suspended indefinitely, and it is clear that there will be two parallel Unix development efforts. The manufacturers say that this duplication will not necessarily have the disastrous effects feared by some users.

"A year ago there were five or six Unix camps, depending how you counted them," says Mr Volker Kleinn, international vice-president of Apollo. "I consider it good news that there are now two camps. After all, competition should be good for everyone in the market-

Walter De Backer, director of Informatics Commission

place."

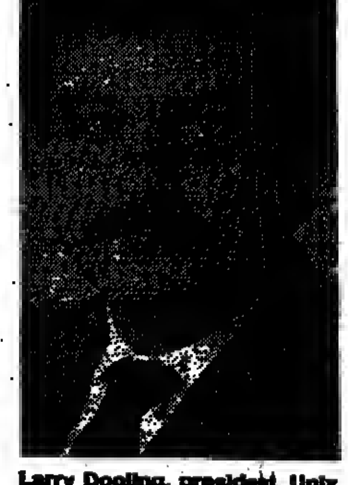
"The users are worrying more than they need to," agrees Mr Larry Dooling, president of AT&T's Unix Software Operation. "Although there are two competing software companies, at the level the user sees there will not be much difference between their products."

The reason why the rival Unix products are likely to end up looking very similar is that the users are now in a strong enough position to force UI and OSF to work along the same lines. If such large customers as the US government say that they will only buy Unix computers that meet certain common standards, then both groups will have to comply with them.

Although there are a number of standards bodies and other organisations through which users can channel their views, one of the most important is X/Open, a consortium of manufacturers which includes most of the world's large computer companies, with membership drawn equally from UI and OSF.

The mission of X/Open is to develop a Common Applications Environment which will enable applications software to run on any hardware (this includes not only a standard Unix operating system but also common networking and other features). X/Open has an increasingly vocal User Advisory Council and an Independent Software Vendor Council.

"While I might prefer that there was only one emerging Unix derivative, two is still far



Larry Dooling, president, Unix Software Operation

better than 19," says Mr Geoffrey Morris, president of X/Open. "As yet, there is no reason that applications portability cannot be obtained across these two emerging operating environments."

According to a market research forecast by International Data Corporation, sales of Unix systems will be worth $20bn or 22 per cent of the world computer market in 1991 compared to $5bn or 6 per cent in 1986.

Although Unix has so far been used most extensively for medium-sized computers — especially those designed primarily for scientific or engineering research — there is no reason why it should not eventually dominate the whole field of commercial computing, from personal computers up through minicomputers to large mainframes.

It is absurd to expect one single version of Unix to serve such a wide range of systems, says Mr Peter Griffiths, chairman of the Instruction Set, a UK-based software consultancy.

"Why should we suddenly become supporters of monopoly practices when it comes to the Unix operating system?" he asks.

"This 'monism' results from a purist misunderstanding which fervently declaims 'there is only one real Unix...'" Mr Griffiths says. "In fact, there will be *many* Unix implementations, fit for many different purposes and this will be Unix's great and enduring strength."

Clive Cookson

The big are getting bigger in the personal computer sector, says **Louise Kehoe**

Established manufacturers are gaining ground

IN THE personal computer industry, the big are getting bigger — while some small companies are struggling to survive.

An industry shakeout is beginning to get under way, say industry analysts, with significant consolidation expected among 'clone-makers.'

After a banner year with over 30 per cent market growth in 1988, the outlook for personal computer sales this year is clouded by reports of falling orders from some of the industry's leading suppliers. Intel and Advanced Micro Devices, both major suppliers of microprocessors and related chips to the personal computer industry, said that they saw signs of a slowdown in the third quarter of 1988; since then several other chip makers as well as suppliers of disk drives, have reported disappointing sales.

As if to prove their suppliers wrong, however, top personal computer makers Apple Computer and Compaq Computer have reported record revenues for last year.

"What slowdown?" asks Rod Canion, president of Compaq Computer, in response to concerns about the outlook for the industry this year.

"You have to be careful in using the suppliers of components as a primary indication of what is really going on in the personal computer marketplace," he warns. "The market from our perspective continues to be very strong."

What is happening, Mr. Canion and others believe, is that a major shakeout among the industry's second tier manufacturers is getting underway.

The signals from the chip and disk drive suppliers are confusing, Mr. Canion suggests — "whenever a new phase of growth in the industry starts, you have hundreds of companies each planning to win a few percent market share. Somewhere along the way, reality catches up and people start cutting back."

The new growth phase that is currently under way in the personal computer market has been spawned by the advent of 32-bit microprocessors and the availability of software to take advantage of these higher performance chips. The major winners in this new product category are the 'big' players in the personal computer industry, while others have been left behind.

"Companies that are well positioned — that have a clear position with the customers and have a distribution channel — are not seeing any kind of a slowdown at all," says Mr. Canion.

In the US, IBM, Apple Computer and Compaq computer accounted for 66 percent of all personal computer sales through retail stores last year, according to Storeboard Inc, a market research firm. Apple's revenues rose by 35 percent in the last quarter, while Compaq's sales were up by 68 per cent last year. It is more difficult to gauge IBM's personal computer sales, but the company says that sales of its new PS/2 products have been very strong.

Analysts predict that market growth will moderate in the US this year to about 15 per cent to 20 per cent, down from 30 per cent last year, but they are predicting revenue gains of about 30 per cent by both Apple Computer and Compaq.

In Europe, too, established manufacturers are gaining ground. Compaq Computer expects Europe to account for 50 per cent of its sales within the next three to five years, up from 40 per cent in 1988.

IBM's international business has also been boosted by personal computer sales in Europe where the company's PS/2 machines have been very successful. Similarly, Hewlett-Packard recorded a 24 percent jump in European sales of personal computers and workstations last year.

Several technology and market trends are combining to provide the largest personal computer companies with a competitive advantage. Most significant is the increasing complexity of personal computers.

Ironically, as the industry strives to make personal computers more 'friendly,' the task of choosing a personal computer is becoming more difficult. Potential customers are confused by the diverging standards in high performance personal computers as IBM pursues its 'microchannel architecture' while Compaq and many others aim to develop an alternative 'extended' architecture that takes advantage of 32-bit microprocessor power, while maintaining compatibility with existing 16-bit software and peripherals.

Adding to the weight of confusion is the switch from MSDOS, the established personal computer operating system to OS/2, as well as the increasingly widespread use of a new 'micro' disk drive for which new copies of programs must often be purchased.

Given the bewildering array of choices, customers are tending to 'play it safe' and purchase from one of the established manufacturers.

Computer sellers are also unsure of which way to turn. Faced with the task of supporting increasingly complex systems, many of which are now networked in corporate offices, dealers have tended to limit the number of different types or brands of computers that they sell. Cut from there product lines are the 'no-name' clones, or those from less well known companies.

Another industry issue that has worked, in most cases, in favour of the larger manufacturers, has been a serious world wide shortage of memory chips. Personal computers account from more than half of all DRAM (Dynamic Random Access Memory) chip applications, and the shortage has had a significant impact throughout the industry.

For smaller personal computer manufacturers, the problem has been how to obtain any memory chips at all. Those that normally buy through distributors have been particularly hard hit. Even when chips have been available, however, prices are extremely high forcing manufacturers to raise their prices.

The increased costs and prices have been particularly difficult for makers of 'clones' that sell primarily on the basis of lower prices.

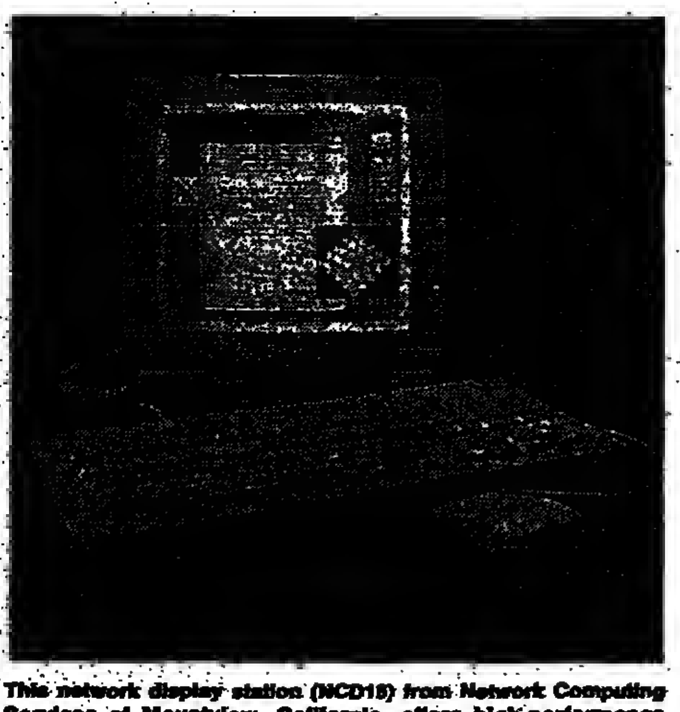
The DRAM shortage has also created problems for some of the major manufacturers, however. Apple Computer, in particular, has run afoul of the memory chip market by buying very large quantities of overpriced chips last summer in excess of its requirements.

Compaq appears to have managed its memory chip purchases more successfully, but the company acknowledges that its production has been limited by memory chip shortages.

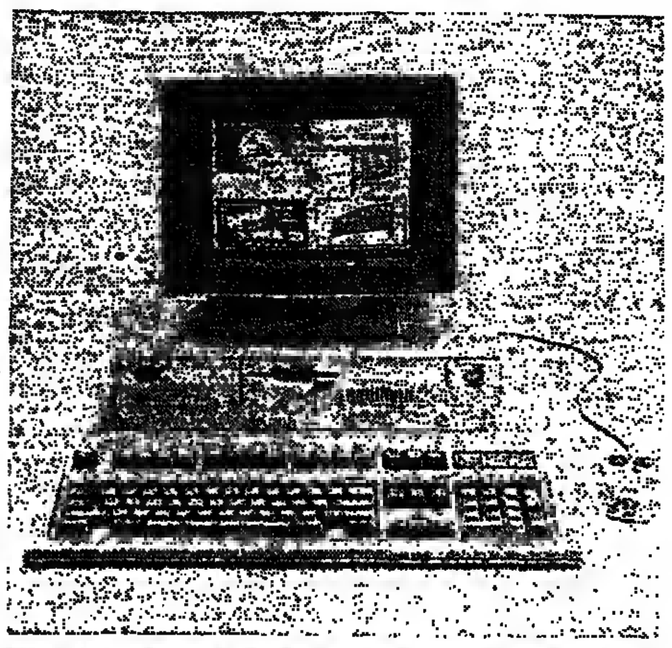
IBM is in the unique position among Western personal computer manufacturers of having its own DRAM production facilities.

Britain's Amstrad has taken the lead in what is expected to become an industry trend by reaching a long term agreement with Micron Technology, a US DRAM manufacturer under which the personal computer maker has taken an equity stake in the chip-maker in return for a guaranteed portion of Micron's DRAM output.

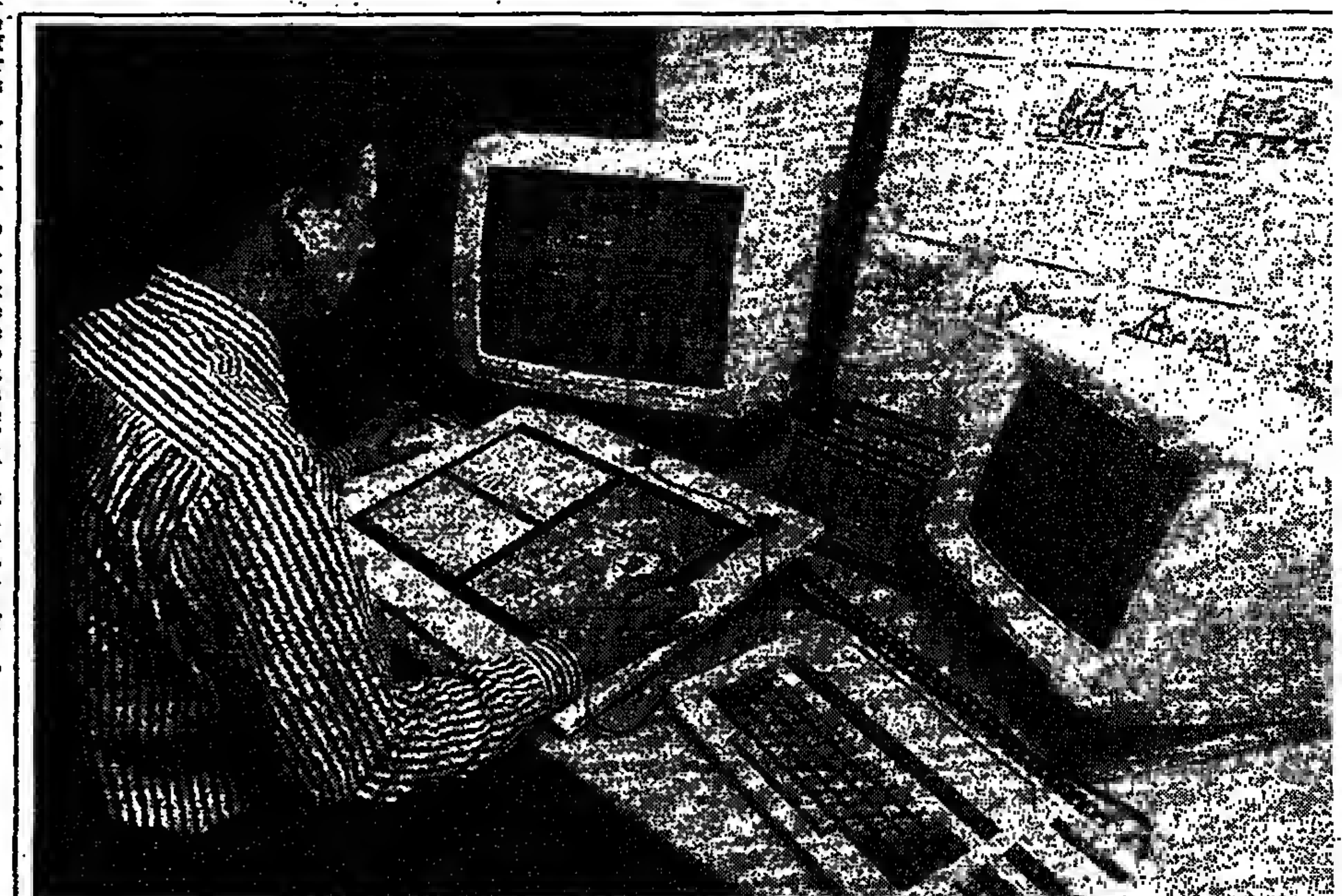
As the confusions of new technology ease and the DRAM crisis blows over, the tables may again be turned on the biggest personal computer companies by challengers. In the meantime, however, severe competition, combined with a slowing growth trend, is expected to weed out many of the market's weaker players.



This network display station (NCD16) from Network Computing Services of Mountview, California, offers high-performance windowing, resolution and communication capabilities.



IBM's PS/2 with 8513 monitor and hardware market screen



■ An architectural technician, above, uses a Prime Medusa software package to plan the layout of timber-framing for a dwelling. This advanced system allows him two and three-dimensional design facilities. For designers in areas as diverse as construction and packaging, computer-aided design and computer-aided manufacturing has revolutionised the training, methods and work-capacity of a many industries. Prime Computers, which acquired Computervision and GE Calma last year, is now one of the world's largest suppliers of turnkey CAD/CAM systems.

Aiming for the business market

TWO YEARS after entering the personal computer market with the PC 1512, Amstrad has unveiled the PC 2000 series — "a range of 24 machines aimed directly at the business market and designed to increase Amstrad's position in the European computer market."

Mr Alan Sugar, Amstrad chairman, says that the company is "moving its PC business into overdrive with the introduction of the PC 2000 series — a comprehensive range of highly specified and powerful business-orientated computers, to be marketed worldwide at prices that will rock the competition — and, we believe have a radical effect on the size of the market."

As part of Amstrad's expansion plans for the corporate market, the company has restructured its dealer and distribution networks.

Amstrad's pre-tax profits for the six months to the end of 1988 fell 16 per cent to £75m. Turnover dipped slightly to £349m (£351m). But for a series of supply problems, particularly the worldwide shortage of memory chips, Amstrad estimates its sales would have been £114m higher and its profits above $100m.

■ The PC2086, pictured left, is one of the Amstrad PC 2000 series, sold in 12 configurations spanning the £599 (plus VAT) to £1,349 (plus VAT) bracket.

Alan Cane reports on the PC architecture debate

The power of standards

A NEW design of personal computer system, able to exploit the full power of the latest generation of the most popular microprocessors while retaining the capacity to run all the software written for current personal computer designs, is expected from a number of manufacturers in the second half of this year.

Their intention will be to establish the new design as a common standard for the whole computer industry. They may, however, be too late to prevent International Business Machines (IBM) establishing its own proprietary design as the *de facto* world standard.

IBM's design is called Micro Channel Architecture, (MCA); the world's leading personal computer manufacturer introduced it two years ago when it launched a new range of advanced personal computers, the Personal System/2.

Towards the end of last year, it was claiming sales of upwards of three million PS/2 systems, sixty per cent of them fitted with the new Micro Channel Architecture.

The opposition, which includes the US companies, AST, Compaq and Hewlett Packard and the Japanese manufacturers Epson and NEC, have developed a design they called Extended Industry Standard Architecture, (Eisa). Work on the detailed design began in 1988 and Eisa chips have been developed, initially by Intel. The first products containing these chips will be delivered in late 1989.

The MCA/Eisa battle has the hallmarks of a classic computer industry technology squabble, illustrating the power of standards and the importance to any company of controlling standards development.

Essentially the row — which involves IBM and companies building personal computers compatible with IBM's — revolves around the move to personal computers based on 32-bit microprocessors, chips able to handle information 32 bits at a time.

Such computers have raw processing power equivalent to that of a mini- or mainframe computer. That power can be directed through suitable software within the personal computer to carry out several tasks simultaneously (multi-tasking) and to make it possible for several users to work on the same computer (multi-user) tasks essentially beyond earlier machines.

IBM and compatible manufacturers are building 32-bit personal computers using Intel's 80/386 microprocessor. This chip and its successors, the 80/486 and so on, are expected to be the standard for personal computer development for the foreseeable future.

The problem lies in the fact that earlier designs of personal computer moved data around inside the computer either eight or 16 bits at a time. As Mr Chester (Chet) Heath, the IBM engineer who designed MCA has explained, while personal computers essentially served single users carrying out single tasks, there was little need for a more sophisticated method of moving information — "but it became obvious that a new set of rules was required to take full advantage of the emerging capabilities of personal computers in a multi-environment. Hence the development of the Micro Channel Architecture."

IBM's aim in developing MCA was to exploit the power of the new chip generations and give its customers freedom to use their machines in new ways while retaining compatibility with software written for the original PC, some 15m of which are now in use worldwide.

MCA also gave it a weapon against the 'clone' manufacturers who had used the easily copied design of the original PC to eat into IBM's market share. Others could copy MCA, IBM said, but only by paying copyright fees — one per cent of sales revenue for a single patent up to five per cent for the complete set.

At this stage, IBM's competitors cried 'foul' — not only was IBM, through its marketing muscle, going to force them to pay through the nose to follow a standard that it controlled, but there was no certainty that MCA was what their customers really wanted.

They argued that IBM has not solved the problem of compatibility with the earlier standard. Compaq Computer, for example, whose market research is legendary, says there is limited demand for products based on MCA — "the primary reason that much of the market is avoiding MCA is lack of compatibility with boards for the industry standard architecture".

Mr Rod Canion, Compaq's chief executive, thinks MCA is over-rated technologically, pointing to the speed and power improvements Compaq has been able to achieve by fine tuning the existing architecture.

"Our biggest innovation," he says, "has been our 'Flex' designs which has enabled us to push the performance of an 80/386-based computer, using industry standard architecture beyond that of IBM's MCA design. That has been a critical factor in launching Compaq out into the forefront of the PC industry as a leader, rather than just a strong player".

But everybody agrees that a new architecture is needed to take advantage of 32-bit technology and Compaq has taken the lead in establishing a group of companies to work together on the Eisa concept, basically a method of shoehorning 32-bit data pathways into industry standard designs, so getting the best of both worlds.

The Eisa group's problem is that MCA is here and now while Eisa is still some months off.

Already there are defections. This month Olivetti, the Italian computer manufacturer, which has been a founder-member of the Eisa group, announced it was launching two machines incorporating MCA.

Apricot Computer, the UK manufacturer, launched MCA machines last year, its chips being reverse engineered by the US semiconductor company, Chips & Technologies. Problems with the chips contributed to an anticipated sharp fall in Apricot's profits for the year.

The market will eventually decide whether it prefers IBM's revolutionary MCA approach or the evolutionary Eisa initiative supported by Compaq and its allies.

There is no certainty which way the battle will go, but Compaq's market research says it is on the right track — "there is no doubt of it," Mr Canion confirms. "We would not take a chance on something like Eisa."

But industry standards, rather than any one standard, are his watchword — "If MCA becomes the industry standard, we will build MCA machines," he promises.

Clive Cookson looks at a golden stream of revenue for hardware suppliers

Software sales top $100bn a year

WHICH COMPANY is the world's largest supplier of computer software and services?

The answer is IBM – also, of course, the largest hardware manufacturer. In 1987, the most recent year for which full figures are available, IBM's revenue from computer programs was $6.8bn, far ahead of any specialist software company. (In addition, the company made $11bn from maintenance and other services.)

IBM's software revenues rose by 64 per cent over the two years from 1985 to 1987, a growth rate that would be impressive for a nimble young company, let alone the giant of the industry. During the same period IBM struggled to increase its hardware sales by a measly six per cent.

In the early years of the computer industry, manufacturers had supplied all the required software 'free' with their machines. But IBM realised in the late 1960s that software could become a golden stream of new revenue, and it started to charge separately for hardware and software. By doing so, it gave birth to the independent software industry, giving other companies a chance to supply programs for IBM computers more efficiently than IBM itself.

Worldwide software sales now exceed $100bn a year, according to Dataquest, the US market research company. And they are likely to rise by more than 20 per cent per year for the foreseeable future.

IBM's revenues from computer programs are far ahead of any specialist software company

In the highly fragmented world software market, the best organised players on the international stage are the large computer manufacturers, following IBM's lead and well aware that for the industry as a whole there is much more growth potential in software and services than in hardware.

There is still scope for very fast revenue growth in certain types of hardware, of course, as Apollo and Sun have shown in workstation manufacturing and Compaq has shown in portable and IBM-compatible personal computers over the last five years.

"Software still represents only a very small proportion of Apollo's revenues," says Mr Bill Cunningham, the company's executive vice-president. "But we are now starting to sell portable software products . . . and we know how important they are going to be for us in the future."

Probably the most significant current development in the computer industry – with immense implications for the relationship between hardware and software suppliers – is the move towards open systems and in particular towards Unix as a common operating system, (as discussed elsewhere in this survey).

The aim of open systems is to enable users to run the same applications software on any computer with sufficient processing power and memory, and to transfer information freely between computers. Although this ideal is still a long way from reality in many fields of computing, such as commercial mainframes, medium-sized computers running Unix already give a glimpse of the future of the industry.

"The effect of standardisation is to create a commodity market for computers," says Mr Peter Griffiths, chairman of the Instruction Set, a UK software consultancy. "There will be more open competition between manufacturers, who will no longer be protected by proprietary operating systems, and this will bring a ferocious rate of innovation with extremely short product lifetimes – no more than six months."

Mr David Favre, marketing director of ABS Computers, a leading UK supplier of Unix hardware, says that standardisation has recently opened the market to "a new breed of 'hot box' manufacturers."

These companies turn out the most powerful machines possible with current components, without worrying about expensive promotion of a brand image. Their products are not normally sold directly to end users but marketed by third-party suppliers who put their own names on the boxes.

Although the first wave of 'hot boxes' are mostly American, Mr Favre expects powerful Unix computers made in Taiwan and Korean to flood the market within the next two years.

Mr A.B.Cleaver, chief executive, IBM UK. Software sales rose by 64 per cent for IBM worldwide in the two years from 1985 to 1987.

The overall effect of open systems will be to accelerate the shift in emphasis from hardware to software. But manufacturers need not feel too dismayed about this, if they can persuade users to treat their computers as consumables rather than as major pieces of capital equipment.

As technological progress and the increased competition brought about by open systems combine to drive down the real cost of hardware, it will make sense for users to replace their computers more frequently.

The value of the information held on most corporate computers already far exceeds the value of the hardware itself –

and this disparity is increasingly rapidly. Many users, however, do not realise how much better they could exploit the intrinsic value of their computer information by processing it on up-to-date hardware rather than on a less powerful systems bought five or ten years ago.

For independent software producers, standard operating systems offer unalloyed benefits – "the move to open systems will make an enormous difference to us," says Roy Sutcliffe of Thorn EMI Computer Software.

"Until now, it has required an enormous effort to port (adapt) software to a wide range of systems, so we can only rejoice at the prospect of operating on a much narrower front."

LOCAL AREA NETWORKS

Wedge bringing a divide in the market

Data processing managers are seizing the opportunity to link together scattered communities of PCs with a local area network, says Daniel Green

WHEN IS 25 per cent growth not enough? When prices fall 25 per cent, too.

Fortunately for most suppliers of local area networks (Lans), this is the reality only for the bottom end of the market. Researchers and manufacturers are united in the view that the rest of the business is booming.

"The shipment curve has been pretty dramatic," says Mr David Hand, an IBM marketing specialist. "It started in the UK in 1987 and spread through Europe and North America last year."

A recent independent report* backs this position. The European market for Lans should grow at 19 per cent a year for networks, it says, and 34 per cent for nodes (the points at which the network plugs into computers, printers and other devices) for each of the next five years.

Nevertheless, suppliers and users are about to face a new factor: the partition of the market.

As the personal computer becomes, to some, a consumer item, the local area network is finding new buyers outside the domain of the computer expert. There is a new generation of personal computer users which has bought off-the-shelf PCs from mass-marketers such as Amstrad, the UK-based consumer durables group.

Larger computer users, on the other hand, are seeking faster transmission speeds and conformance with international technical standards.

A wedge is being driven into this split in the market by variations in the way Lans are used. They were once for sharing expensive resources. Five years ago, it made sense to buy a £5,000 laser printer, for example, if it could be used by several PCs, which themselves cost £2,500, on a Lan also costing thousands of pounds.

This year it is possible to buy a laser printer for under £1,000 – and the buyers of £500 PCs want cheap Lans to make the connection.

At the other end of the scale, whole companies have undergone the personal computer revolution. The data processing manager is seizing the opportunity to tie together the scattered communities of PC-users with a Lan. The users want the change, too. As well as sharing hardware, they can exchange documents, send each other messages, have access to a central database and so on.

"A communications ethic is taking over," said Mr Tony Rixon, Director of The Networking Centre, a UK government funded business advice body.

Mr Paul Evans, UK marketing director of Digital Equipment, agrees: "The personal computer was a backlash against the centralised mainframe approach."

The desire for communication means that all corporate PCs are potentially part of a Lan. Mr Evans says that "at most 13 per cent of personal computers are on Lans and growth in PC Lans is about 60 per cent a year."

Such growth figures must be taken with a pinch of salt. Manufacturers and market researchers differ widely over the scale of growth they predict. This is partly a symptom of uncertainty over what devices to include within the forecasts. The key three categories are:

- Low speed. The original Lans; little conformance to international standards. Low price, but inflexible. Amstrad's four-node Lan sells for £399.
- Medium speed. The main growth area for the last 12 months and the next five years. It includes the key ethernet and token ring international standards.
- High speed. Products still under development or produced in small quantities for industrial environments, including optical fibres. Significant growth is not expected until mid-1990s.

One of the spurs to Lan growth is the establishment of international technical standards. Standards give the customer more choice of supplier is the industry's public stance, but there is a tacit acknowledgement that customer pressure for non-proprietary standards has forced their adoption. As well as avoiding the restrictions of being locked into a single supplier, Lans in particular can add value to existing investment in computers.

Not even IBM can resist – "the vast majority of buyers have mixed vendor equipment," says Mr Hand.

The US standards IEEE has specified three standards for Lans. The are called 802.3, 802.3 and 802.4. The first and the last are the most important in terms of backing and support among influential customers. They also precisely describe the Lan products most associated with DEC and IBM respectively.

International standards are supplanting the key role of government procurement policies in specifying which manufacturer will have a technical edge in the private sector.

European Commission directive 87/95 requires that all public procurement within the EC of a value over 100,000 ecus shall be specified to meet European standards where possible and international standards where not. In practice, this means choosing either 802.3 ethernet-type or 802.5 token ring.

For giants such as IBM and DEC, standards are a double-edged sword. If you cannot lock your customers into your own products, they may turn to independent suppliers.

"Token Ring is generally supplied by IBM but I think we will see changes in that," says Mr Rixon. There are already many suppliers of ethernet-standard equipment apart from DEC.

Some independents are already well-established and two stand out as giants in their own right: Novell and 3Com. These two have embarked on a battle for customers who want to link the newish range of IBM personal computers, the PS/2s.

Technical advances are one way to secure market share. In November IBM, for example, launched a quadruple-speed version of its 802.5 product. Versions of ethernet using cheap cabling and even optical fibres have been released by Dec and other companies.

The drive for standards allow low-margin mass manufactures in and will encourage a greater reliance on software on the part of the established majors.

"Some hardware components have already reached the status of commodity items," says Mr Evans.

The key area where the majors will stay strong is network management. It is essentially software that helps more efficient allocation of resources and can pinpoint bottlenecks.

However, while the technical side of the Lan is becoming well understood, the marketing side is still shrouded in murk. The low end is likely to become increasingly preoccupied with consumer-style marketing, while the rest of the sector will pour itself into the familiar mould of corporate computing.

Even there, the way forward is unclear. Few corporate buyers justify the price of a Lan in terms of increased profits or rapid cost saving. Nor is the buying decision usually driven by the need to solve a specified problem – "buying a Lan is still a qualitative decision," says Mr Evans, "based just on faith, sometimes."

Local Area Network Markets in Europe, Logica's Telematica Service, December 1988.

Problems for computer storage manufacturers

A chastened sector

FOLLOWING a traumatic year in the disk-drive market, computer storage manufacturers will enter 1989 an older and wiser breed. Many will write off 1988 as the year when they grossly miscalculated.

Following the boom year of 1987, when they sold 10m disk drives, manufacturers built up the capacity to make 17m of them in 1988. Many companies borrowed heavily to do that.

In the event, there was an over-production of 3m units, which resulted in increased competition, falling prices and wobbly finances.

To predict such a rosy market, storage manufacturers were relying on the fact that every time a company buys a new computer system, that is only the beginning of the sale.

On average, companies upgrade their computer storage systems by between 30 and 50 per cent a year, a boon on top of a healthy market in first time buyers.

Chastened by their wild miscalculations, manufacturers are making far more conservative forecasts for 1989, as are many analysts. One of the least optimistic predictions comes from US market analysts Dataquest, of San Jose.

Phil Devin, senior industry analyst there, calculates that the growth in disk drive sales will be only 17 per cent this year.

The main reason for such low figures is that over-production in 1988 has resulted in many retail outlets still holding last year's stock.

However, disk makers are putting on a show of cautious optimism. They argue that the basic changes in the market on which they made the 1988 predictions still hold true, even if they were over-optimistic about the timing. They believe changes in the way companies are beginning to use computers will increase the demand for peripheral storage devices across the board, from mainframes to personal computers, (PCs).

To begin with, there is a growing demand for real-time database systems, which mean mainframes need huge on-line storage capacity. At the other end of the chain, many offices have clusters of PCs which get data from the mainframe and then store and process it locally, so needing local storage systems.

The biggest beneficiary of any market growth will be computer manufacturer IBM. It dominates the market for disk drives, and sold nearly $7bn worth in 1987, according to the 1988 Disk/Trend Report. Its main rival was Fujitsu, the Japanese computer and peripheral manufacturer, which sold a comparatively meagre $1.5bn worth.

Production of IBM 3335 disk storage systems at Havant, Hampshire. IBM is increasing its dominance in the market

With just over $1bn of sales, Seagate topped the table of dedicated disk drive makers which sell their products on to other manufacturers.

In the past year, IBM has increased its dominance. During 1988 it produced nearly 2m 3½-inch disk drives in Japan for its PS/2 machines, and began selling disks onto the merchant market – in the past it has been a purchaser, rather than a supplier of disk drives.

Hewlett-Packard followed suit, and is also now producing its own disk drives. None of which is good news for the already beleagured independent disk drive manufacturers.

For the disk drive customer, the choice is still between two technologies: magnetic and optical media. The different applications of the two media used to be clear cut, with magnetic tape popular for on-line storage because it was cheap and had fast access times, and optical disks favoured for archiving because of their long shelf-life and high capacity. In particular, magnetic storage devices could be written on and read, whereas optical disks could not be changed.

However, developments in both the technologies now mean the decision about what to buy is becoming more and more difficult, explains Peter Scott, a consultant with Arthur D. Little.

"It's a very interesting time because the technologies are running neck-and-neck," says Scott. "A year ago, people would have said optical storage was great for archiving, but not for on-line storage because you couldn't write on it. Now you have the Worm systems and erasable systems in response to that."

The market for Worm optical disk drives – drives which write information once on the optical medium but can read it many times – is growing rapidly, according to Dataquest. In 1987 the world market was worth $231m, but that is expected to rise to $655m in 1989.

But even faster growth is expected of erasable optical disk drives – drives that can write, read then re-write data onto an optical disk. Although manufacturers only began marketing such systems in 1988, the market is expected to be worth $112m this year.

In magnetic storage, by far the largest market is in rigid or hard disk drives – a market which will be worth almost $38bn this year. The fastest growing end of the market is in the smaller three to four inch drives, but most revenue still comes from the top-end 14-inch drives – a predicted $12.79bn this year.

The demand for 3½-inch disks has been one of the few areas where manufacturers have not been able to meet demand over the past year. Now disk makers such as Seagate, which has been badly hit over the past year by falling prices, are gearing up production in the smaller end of the disk market.

One reason for the demand is the market growth in PCs which can handle colour graphics and imaging, and so need greater storage capacity. Joe Jura, product manager for storage products in the European division of Fujitsu, is optimistic that PC purchasers will increasingly require higher capacity storage devices.

Top-end PCs with 20-40 Mbytes of storage will be superceded by systems with 80 Mbytes or even 160 Mbytes when used for applications such as modelling or stock control, Mr Jura predicts. Networked PC users are already beginning to demand 380 Mbytes of storage and later this year 760 Mbyte systems could appear.

At the top end of the magnetic storage market, cartridge tapes look set to continue their market takeover from the traditional reel-to-reel systems. There, too, IBM is increasing its dominance. That was confirmed last month when Digital Equipment, the second largest US computer manufacturer, announced its cartridge tape system for use with clusters of Vax computers, which is IBM 3480 compatible.

Della Bradshaw

Della Bradshaw reports on the market tussle between dot matrix and laser technologies

Printers: a thorny issue for suppliers and users

OVER THE past two years, computer printers have become a thorny issue, not just for the European and Japanese manufacturers, locked in anti-dumping disputes, but for business users as well.

With the widespread introduction of personal computers in the office and moves to take commercial computing out of the hallowed data processing room and distribute it around the building, attention has begun to focus on the office printer. Companies are now having to decide whether to replace the noisier impact printers, particularly the ubiquitous dot matrix models, with the quieter but more expensive laser printers, which can be shared by a number of computer users on one network.

In terms of unit shipments, the lower priced dot matrix printers — which generally cost a few hundred pounds and are sold with most personal computers - still take over 70 per cent of the market. In 1988, more than 10.5m dot matrix printers were sold worldwide, according to market analysts Dataquest of San Jose, California. They predict that figure will rise to over 12m units in 1989.

The dot matrix printer market is dominated by Japanese manufacturers, such as Epson, Brother Industries, NEC and Fujitsu. But European manufacturers, such as Olivetti, Philips and Bull HN Information Systems (formerly Honeywell Bull) are now confident that with the dumping levies imposed on their Japanese rivals, they can woo back the European customer.

While European and Japanese manufacturers have been fighting it out in the legal system, dot matrix and laser technologies have been fighting it out in the marketplace.

For office environments, laser printers are slowly taking over from dot matrix printers because they are quieter, give a better quality print and are faster. The top-end laser printers, for example, can print 20 pages of documents a minute.

Although expensive, laser printers are rapidly coming down in price, and can now cost as little as £2,600.

Dataquest predicts the market for laser printers, which was worth only $4.4bn in 1987 will be worth almost $8bn this year, almost equalling the market for dot matrix printers which will be worth $8.7bn. This recent upsurge in laser printers has been good news for electronics manufacturer Hewlett-Packard, which claims to have 40 per cent of the laser printer market.

Manufacturers of dot matrix printers, however, are not throwing in the towel. Mr Gianlorenzo Bentigvolio, director of Compuprint, the printer division of Bull Italia, believes the dot mstrix printer is sophisticated enough to hold its own against the laser printer.

"Dot matrix as a technology has a lot of capabilities", says Mr Bentigvolio. "It's a question of improving the pluses and decreasing the minuses."

According to Bentigvolio on the plus side there is the low cost, high speed, robustness and capability of making a number of 'carbon' copies — non-impact printers such as laser models cannot do that. On the minus side he lists the noise — which he says is being reduced all the time — and the print quality.

Up to 80 per cent of the dot matrix printers sold are still the bottom-end nine pin models, which use nine pin heads to print each character. They are sold with the low-end PC's and give a relatively poor quality type. However, the superior 24-pin version is rapidly taking market share away from its cheaper cousin.

As a wider range of 48 pin dot matrix printers come onto the market during this year, they could also gnaw away at the lower end products.

Daisy-wheel impact printers, which used to dominate the market for cheap printers with a high quality type face, are now also losing market share to the better quality dot matrix printers.

Both dot matrix and laser printers, which will dominate the computer printer market for the foreseeable future, are becoming more sophisticated in the features they offer, and in particular are now responding to some of the problems faced by office computer users.

Many of the latest dot matrix printers can be fed with single sheet or continuous stationery at the same tims, allowing users to switch automatically from headed notepaper to computer printont.

Hewlett-Packard now sells laser printers that print on both sides of the paper, and can bind documents along either the long or short edge. Nicky Ayre, product marketing manager for printers in Hewlett-Packard's UK operations, says the printers are ideal for newsletters or technical documentation.

One of the most significant advances in laser printers came last month, with the endorsement by IBM of the PostScript software language developed by Adobe Systems of California. PostScript was developed to give better text and graphics reproduction and also to allow any computer to work automatically with any laser printer — at the moment every time a document is printed, the computer has to be told what brand and model printer is being used.

With IBM, Digital Equipment, NEC, Wang, NeXT, Hewlett-Packard, Fujitsu and Apple Computer (which owns 19 per cent of Adobe) among the list of companies incorporating the software in their products, PostSript now looks certain to become a *de facto* standard.

Although the printer market is dominated by two technologies, a third, ink-jet printing, is poised to eat into their market share this year, following the development of ink-jet printers which can use plain rather than specially-adapted paper. Market leaders in ink-jet technology are Hewlett-Packard, Canon and Epson.

Ink-jet printers work by shooting jets of ink at the paper. Low-end models have between 10 and 12 nozzles, which give 180 dots per inch, while top-end models give up to 300 dots per inch.

Although ink-jet printers are quiet and cheaper than laser printers — they cost about £800 — *they can still only print one* copy at a time. In addition they are slow, printing only about two pages a minute, about a quarter of the capacity of the cheapest laser printers.

However, ink-jet technology is likely to come into its own *as a way of printing colour.* As colour bnsiness grsphics become the accepted norm on personal compnters, tbe demand for colour ink-jet printers, which combine four different ink colours together to give over 300 colour combinations, is increasing. Ms Ayre of Hewlett-Packard reports that the market for such colour printers at the moment is very small — "but the interest is amazing!"

COMPUTER LEASING

Lucrative business for the big players

NEW COMPUTER equipment generally tends to work reliably for at least five years — but longevity is not necessarily the most significant factor in the purchasing behaviour of computer users.

It is quite commonplace for a data processing manager (the DPM) to find that a machine, bought two or three years back which *then* offered the best price/performance deal, but now provides computing power relatively more expensively than a newly-announced model.

Furthermore, the DPM may often feel that his machine is *becoming an increasingly 'tight fit'* after two or three years of increasing demands for more services from user departments. The ideal situation would allow him to sell the remaining life of that machine at the same price as he is currently paying.

IBM mainframes are readily marketable at any time during their first five years and even beyond, although maintenance costs then begin to outweigh the machines' utility value.

In the days when IBM *offered rentals*, this service did not come cheaply, but at least things were relatively straightforward for the user. However, it meant that IBM itself had to take a position on residual values for the equipment on its books, and this could *impinge on its* flexibility when it came to pricing new equipment.

Traditionally, when users opted for outright purchase instead of rental, a lease could be signed to finance the use of the computer over its useful five-year life — typically, a *conventional financial lease,* written in the same way as a lease for any other piece of office equipment — or for company vehicles.

If they wanted to dispose of the machine before the end of the lease term, they would have to play the market for residual values. Then a number of specialist computer leasing companies began to take responsibility for residual values, effectively setting themselves up in the rentals *business.*

These companies offer a so-called 'operating lease' as an alternative to the financial lease which, for a premium element on top of regular repayments, allows the user (or lessee) to return the machine before the end of its *useful life.*

The operating lessors have taken the lion's share of the computer leasing business.

This is a volatile business, however. Meridian International, for example, is currently taking court action over net asset values (exclusive of residual values) against former shareholders of IBL, a UK computer leasing company which it acquired in November 1987, and which had two years previously been floated on the *Stock Exchange.*

Operating leasing is a lucrative business for big players, a fact which has not been missed by IBM when it set up IBM Credit Corporation which became the world's largest leasing company within a couple of years of entering *the market.*

This general expansion has also served to accelerate the pace of bankruptcies, takeovers and consolidations in some parts of the sector.

"IBM's entry into leasing baffles me," comments Mr Stephen Hamilton, senior vice president for European marketing at Comdisco, previously the world's largest lessor of IBM equipment, and now number two.

Operating lessors have taken the lion's share of the computer leasing business

"I cannot see why it could possibly be interested in residual values, except to exert control over users who might otherwise be tempted to defect to other manufacturers."

Users typically fall within three distinct categories, according to Mr Hamilton — 'leading-edge, competitive-edge and trailing-edge.'

With leading-edge users, cost is not the primary issue. Processing volumes is what counts here and they have to have the latest technology and/or largest machine available at the time.

Competitive-edge users are not necessarily interested in the latest technology — they just want maximum performance for a given expenditure. They would, for example, be in the market for an IBM 3090/200 mainframe which sold for $5m in 1985 or 1986, and which was now being offered for $2m.

Trailing-edge users will probably settle, for example, for an IBM 3084 at $500,000 which will have sold for $8m in 1984.

Atlantic Computers, pioneer of the concept of flexible leasing, is less sanguine about IBM's muscling in to the leasing market.

The company joined forces with IBL and Econocom, and took IBM to court in Holland in 1986, claiming that it was monopolising the market and *working against* the European Community's competition policy, but then decided to settle amicably instead.

"We found that we could not compete with IBM on price in Holland because they were able to take the theoretical maximum advantage of the Dutch tax system at 23 percent while the best we could get was 17 percent," says Mr David McCormick, chief executive of Atlantic.

"Atlantic is a well-managed company, but since 1986 when IBM came on the scene, our growth rate has slowed down from 80 per cent compound a year to about 25 per cent" — still an impressive growth rate by most standards.

One interesting new development sweeping through the leasing market is "securitisation". Atlantic became part of the British & Commonwealth group, a large financial services company, in September last year, but is remaining tight-lipped about any future plans to do with securitisation.

Mr Ian Orrock, chairman of Meridian, says his company is looking to form a joint venture with a bank some time in 1989.

"I am aware of securitisation and I have a good understanding of how it works in the US, but it is early days yet. One needs a banking-type partner to make it work and to underwrite sucb structures," he says.

MBA computers, which specialises in smaller computers, even goes so far as to use the term 'instrument' to describe the way its financial deals are written.

"All leases are written in *much the same* way, and there is always an element of choice in who the lessee decides to do business with," explains Mr Perry Burns, director of MBA Computers.

If the trend is towards a smaller number of large players, residual risk has to be better managed. If it works properly, securitisation will shift some risk away from the leasing companies and towards providers of funds with a sense of adventure.

Boris Sedacca

Ian Orrock, chairman of Meridian, a leading computer leasing and services company: aware of the potential of securitisation.

Computer maintenance sector boosted by micro revolution

Influx of new services

COMPUTER MAINTENANCE is often described as the Cinderella of the industry. Although it has relatively little glamour, it is a growing sector with substantial earnings.

Quoted maintenance companies usually show high price/earnings ratios. Once a contract is won, there may be some fallout, but repeat business is frequent.

The UK third party computer maintenance business (TPM) totalled £165m in 1985, and will grow at an average annual rate of 20 per cent to reach £310m in 1991, according to Mr Robert Brittaine, chairman of the Computing Services Association's third party maintenance special interest group and managing director of Advanced Technology Maintenance.

The rise of mixed-vendor computer installations is one of the most important factors in the growing attractiveness of third party maintenance, as users become more sophisticated and better able to put together their automation strategies.

A major factor in the growth of TPM market was the meteoric rise of the business PC. When machines such as the Apple and the Sirius (now defunct) first appeared in the early 1980s, the companies selling those products had no back-up service organisation at all, so the micro revolution invoked a flood of new maintenance companies on to the TPM market.

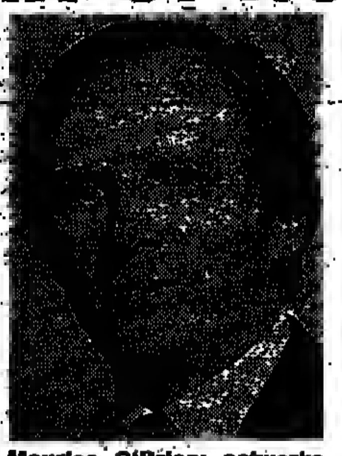
According to Mr Brittaine, the main area of opportunity lies in personal computers and peripherals, and that only about five percent of TPM companies offer mainframe maintenance and less than half of them minicomputer maintenance.

Generally, their charges are lower than the manufacturers' own services, — "the main reason for this is that they do not have to fund large research and development organisations — and their overheads are lower since they do not require an extensive network of sales offices," he says.

The use of corporate PCs and the islands of information they create has generated increasing demand for communications.

Communications and networking pose very specific problems as they converge with traditional data processing disciplines — "networks are far more difficult to fault-find than mainframes, where diagnostics routines will have been well established," suggests Mr Maurice O'Brien, managing director of Computerald Services, part of Thorn EMI.

"Trying to find out what has happened to something which has been put in at one end of a network and does not re-appear 24 nodes down, as required, is a lot more difficult than tracing a fault within one manufacturer's system."



Maurice O'Brien: networks present complex challenges.

As in the leasing industry, increasing concentration in the hands of a few large players is also beginning to emerge in the maintenance business, as Granada's recent acquisitions of the UK's largest computer maintenance companies, Computer Field Maintenance (CFM) and DPCE, shows.

Computer Field Maintenance was the undisputed market leader. Set up in 1970 by Derek Royle, ex-Marconi Computers, where he was head of the servicing side, the company was privately owned until 1978 when it was acquired by IAL before changing hands again.

Mr O'Brien now claims number two position for Computerald, behind Granada — "we do not run much into them in competitive situations. The component bits which they bought were in the traditional minicomputer and mainframe markets."

One of the problems of mending boxes only is that hardware prices are dropping. Over the last 18 months, Computerald has gradually moved away from hardware-only maintenance and added other services like system support, network planning, integration and installation.

Maintenance companies have an ambivalent relationship with the manufacturers. Manufacturers quickly forget old kit. Their prime motivation is to achieve a sale.

They may discontinue this support once they consider the product obsolete. An independent maintenance company, relying solely on revenue from continual support, will wish to extend this period for as long as possible.

Some manufacturers object that third party maintenance suppliers are only creaming off the most profitable part of the support operation, and not providing the other sorts of help and guidance which the manufacturer can give.

IBM is generally regarded as one of the 'good guys' of the industry when it comes to working with independent third party maintenance companies. Other mainframe manufacturers have a mixed record, and cases are always coming to light of some legal tussle.

It is not surprising that manufacturers should want to hold on to their maintenance revenues. Some try to do it by locking in users, and locking out TPM services. Others also try do it by keeping ahead of the game, technologically.

For example, 20 percent of Tandem's $1.3bn turnover last year came from post-sales services, a large proportion of which was maintenance, but which included areas such as education and training.

Tandem may appear to be coy about giving an exact percentage figure to maintenance, but the picture is becoming increasingly blurred over the years as manufacturers move towards remote diagnostics over telecommunications links to customers' machines.

Remote maintenance centres such as Tandem's Online National Support Centre, keep a log of errors to identify faults automatically as they come in.

This helps to reduce costs, cut maintenance times, and still provide for uninterrupted operation. Having the most reliable machines does not do away with maintenance. If anything, it also involves users in self-maintenance.

According to Stratus, Tandem's main rival in the reliable computer market, 'co-active' maintenance lessens the time-lag between fault identification and rectification by involving the user in helping to fix his own machine. Maintenance programs and processors built into systems, remote diagnostics and duplication of components provide the basis for co-active maintenance.

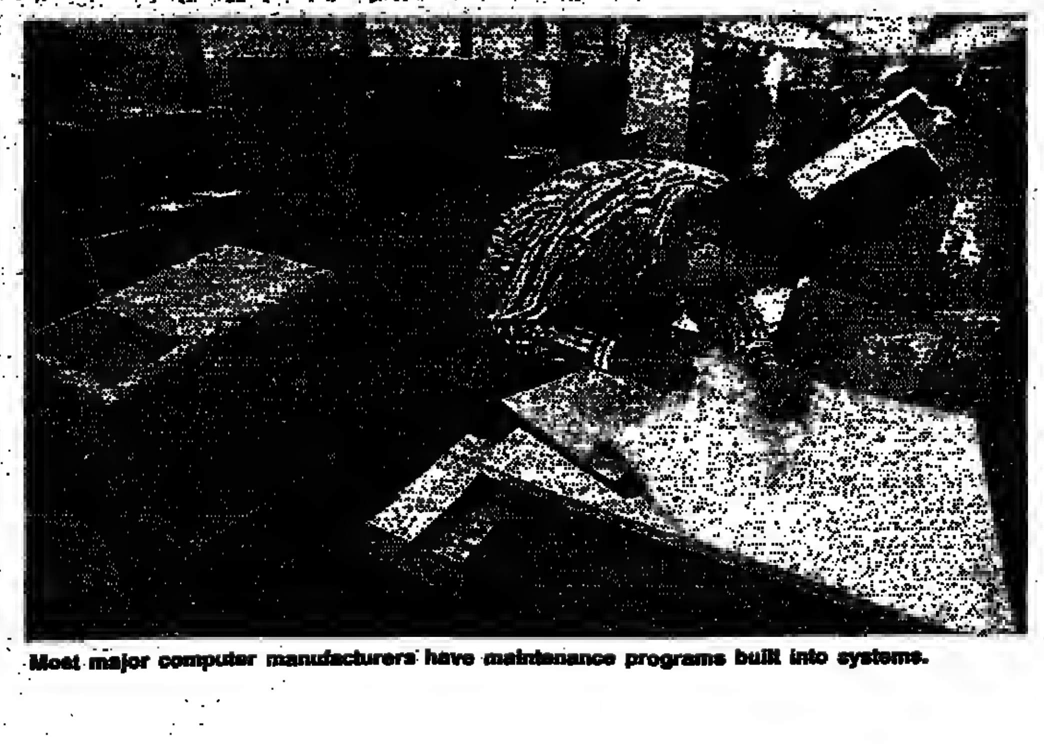
There is continuous self-checking of components so that errors are detected instantly and failed components taken off-line before they affect other parts of the system.

A system error log automatically informs a Stratus Customer Assistance Centre, via a worldwide remote service network. The network also retains a high level of technical specialist staff to work on a problem with the customer in real time.

At the end of the day, it still comes down to people. The market is volatile, and it is exceedingly expensive to recruit staff.

In-house maintenance operations or TPM companies, like any other in the computer industry, usually try to recruit the best-qualified staff available, but recruiting graduate engineers is difficult if no suitable career path can be offered — and there is always a shortage of people with information technology skills.

Boris Sedacca



Most major computer manufacturers have maintenance programs built into systems.

Alan Cane compares the fortunes of two contrasting players in the computer industry: Compaq and Wang

Year of record revenues

COMPAQ COMPUTER Corporation's financiel achievements would by themselves be enough to distinguisb tbe seven-year-old Houston, Texas, personal computer manufacturer from other high flyers in its mercurial industry.

Earlier this month it announced record revenues of $2.1bn for 1988, a 69 per cent increase over the 1987 figure of $1.2bn. Pretax profit was $366m compared with $228m in 1987.

Its previous records include revenues of $111m in 1983, its first full year of operations, and making the "Fortune" magazine's Top 500 list faster than any company in history.

The only question seems to be: how long can it maintain such a hectic pace? Inevitably, not for long. Analysts are predicting revenue growth of only 30 per cent in 1989 and Compaq management claims to be happy with that figure.

Technologically, it is no slouch. In 1986, it was one of the first companies to introduce a personal computer based on Intel's most powerful microprocessor chip, the 80/386. Three years on, it claims to have 50 per cent of the market for these high performance machines, keeping, among others, International Business Machines at bay.

Its success, nevertheless, raises a number of interesting questions apart from its durability. Its machines – portables, desk tops and, since the middle of last year, battery operated laptops – are clearly first rate, but have none of the glamour of an Apple Macintosh or cost advantages of a Zenith.

It does not deal directly with its customers and it has no ambitions to become a systems integrator, the path so many other, less soccessful computer vendors are trying to follow. As one competitor remarked: "Compaq is the brick-maker of the computer industry. It manufactures the bricks that others build into complete systems."

The company was founded by three engineers from Texas Instruments, Rod Canion, now president and chief executive officer, William Murto, who left some mooths ago to devote himself to religion, and James Harris, now vice-president for engineering.

All three had substantial experience of business and technology and therein lies at least one clue to their success. It was probably the most professional team ever to start up an independent personal computer company. There was none of the enthusiast or hobbyist culture which permeated other successful start-ups like Apple.

Canion says: "We were not a classic garage start-up. We started out as businessmen from a big company with some new ideas about how to do things but very much founded on good business principles."

So Compaq takes few risks and improves the existing rather than pioneering the new. It spends less than half the industry average on research and development. Last year, it spent $75m on research and development compared with the $250m invested by Wang, a company only half as big again, and the £5bn or so invested by IBM.

Instead, it gets powerful leverage from its use of standards, dealers and software companies. These are popular techniques in the PC business but Compaq uses them with special flair.

It distributes its machines only through dealers. While other manufacturers are content to let their own direct sales force fight for sales in competition with their dealers, Compaq builds bonds of mutual trust which are re-inforced with each successiva product launch.

The strategy is strengthened by the quality of computers the company builds. Compaq builds compatible PCs, not clones. Its machines behave like IBM's own (only somewhat faster), but are not slavish copies. The internal circuitry is Compaq's own design.

Dealers are heartened by the facts that Compaq is not selling against them, that they make a good margin on the products and that they never have to apologise for deficiencies in the hardware.

Furtbermore, Compaq sets up extensive and continuous market studies to establisb what their customers really want.

"We have our own in-house group that designs the testing," Mr Canion says. "It is important not to fool yourself inadvertently. We look at a lot of different kinds of research, not trusting in just one angle or one source."

The proof is that Compaq has rarely had a product fail in the marketplace.

Innovation for Compaq tends to mean exemplary engineering rather than the dramatic changes of direction exhibited, for example, by Apple Computer with its screen graphics and mouse-human interface.

"We do not innovate like that," Mr Canion says. "Our products have to be based on existing standards. The Apple Macintosh with its innovative user interface took two years to establish itself in the market place. If it had been based on standard designs, it would have found acceptance much quicker".

Mr Canion argues that being first with new products in a market area where standards have already been set confers advantages that are hard for competitors to combat. He thinks that the industry and its customers will standardise on machines based on the 80/386 chip for many years ahead – a view shared by most industry analysts. That was why the company was determined to beet IBM to the launch of e 80/386 PC

Mr Canion says: "We believed that if we gained true acceptance in tbe 80/386 marketplace ahead of IBM, that would serve us for the entire life of that market. It is now two years since we launched that first 386-based machine and we still have the largest market share and the newest and most advanced technology.

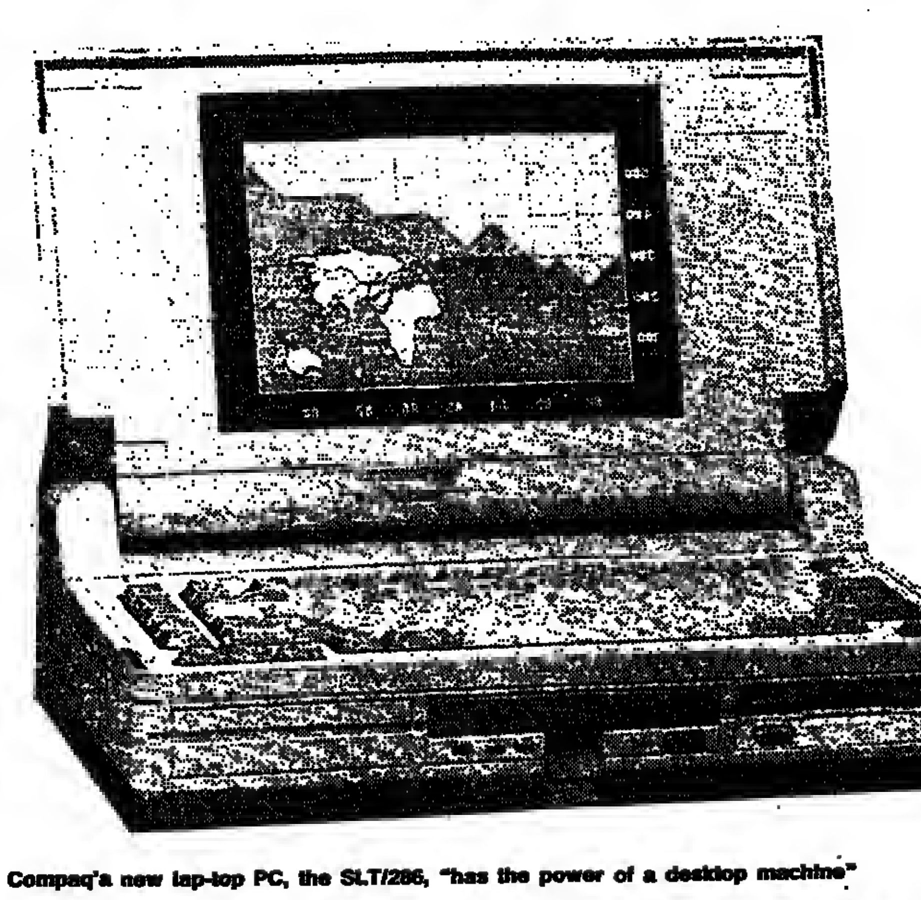
"Our market share must fall but the 386 market is growing so fast that a strong position there will guarantee strong growth even if overall market share declines."

It raised its sights yet last year, aiming beyond mastery of a market sector to industry leadership. It wants its vision of personal computing to prevail in a world dominated by IBM, the undisputed worldwide leader in personal computers. It is taking on the toughest opponent, but it has chosen the sharpest of weapons – industry standards.

The company is the principal force behind a move to develop an improved version of IBM's original personal computer design (or architecture) as the standard for the personal computers of the future, (see separate article in this survey on the battle of the architectures).

Called 'Eisa' (extended industry standard architecture), it is a development which would ensure that personal computer users would be able to continue to use all their existing applications software on 80/386 machines and beyond.

The first Eisa machines should be available this year, testing Compaq's mettle as industry leader, rather than follower.



Compaq's new lap-top PC, the SLT/286, "has the power of a desktop machine"

An improving picture

WANG, the US minicomputer company whose powerful growth through the late 1970s and early 1980s, was based on words processed by computer, is hoping that images processed by computer will retrieve its fortunes in the 1990s.

If the market is ready for its approach to capturing, manipulating, transmitting, storing and retrieving images, its future growth, senior managers say, will top 25 per cent a year, close to its average over the past two decades. If not, it will be hard pressed to grow at more than eight or ten per cent a year.

With revenues in 1988 of over $3bn for the first time, Wang, based at Lowell, Massachusetts, has been one of the world's major computer companies for a long time, yet its performance since 1984 has been decidedly patchy.

In 1987 it made a loss, some $70m on a turnover of $2.83, the first in its 38 years existence. It made a profit of $92.3m in 1988, but over the first six months of the current financial year, its revenue was unchanged from the year before at $1.48bn while income was down 75 per cent to only $14.1m.

It is a depressing performance for a company that one leading analyst labelled the "Orient Express of Office Automation" in the early part of the decade when it was riding the crest of the wave. Stephen McClelland wrote: "It will squeeze many competitors. This company will be a giant in the 1990s."

Well, of course, it is a giant already, but a Goliath showing clear signs of vulnerability.

It blamed its poor showing over the past six months on a four-week delay in the production of its latest minicomputer system, the VS 5000 series, pointing out that it shipped only 1,000 units in December 1988, about half the expected volume.

Mr Frederick Wang, Wang's president and chief operating officer, argued that the delay had marred a picture that was otherwise generally improving.

Dr An Wang, the company's founder, chairman and chief executive, takes an even more relaxed view, pointing out that in the past 30 quarters, the company has lost money in only three.

In a recent interview with the Financial Times he said: "This is not a major disaster for me. I remember that in 1962 we had developed an electronic typesetting machine which we marketed through an independent distributor. It was contributing $1m to our annual revenues then of $1.5m. Then the distributor decided to design and market his own machine, so we lost that business, but we managed to survive. That was a much bigger shock".

Financial analysts, however, take a less philosophical view of the company's progress and are pessimistic about Wang's profits recovery in the short-term.

Wang's predicament seems to be the result of a number of factors, some, but not all of which, are common to many minicomputer companies.

■ It became too closely identified with office automation and, particularly, with word processing. The minicomputer market softened in the US in the mid-1980s to some extent as a result of management disillusionment with office systems. Wang geared up its production capacity in anticipation of a 40 per cent a year growth in its markets that never arrived.

Furthermore, personal computers, an area that Wang moved into only slowly, were taking on many of the word processing tasks that had previously been the preserve of Wang's mini-computer based shared logic systems.

Wang says now that about 90 per cent of its European turnover (where it has put up a more consistent commercial performance than in the US) comes from data processing as opposed to word processing applications.

In the US, the figure is closer to 80 per cent; the company is trying to establish itself as a "systems integrator" matching hardware to software to meet the customer's needs.

■ Wang, in common with most minicomputer companies, realised too late how quickly the data processing world was moving to standard products – standard processor chips and standard software.

Now it points out that it is a member of all the major standards committees and is an associate member of the Open Software Foundation, an organisation attempting to create standard software based on IBM's version of the Unix operating system and a rival to Unix International which is going for the same goal with AT&T's version as starting point.

Dr Wang says its membership is pragmatic and implies no specific approval of the OSF approach: "Personally, we would rather have one Unix than two. We want to be able to continue to talk to both camps."

■ It placed too much emphasis on its technological expertise and lost sight of what its customers wanted. Now it is reaffirming its belief in what Dr Wang calls the six technologies – the processing of data, words, voice and image, networking and ease-of-use.

Wang believes the time has come for images to be processed by computer as easily as text. While it is hardly betting the company on its "Wang Integrated Image System (WIIS)," it attached great importance to market acceptance of image processing.

"In 1976, when we announced word processing, we did $10m in the first year" Dr Wang says. "With image processing, I'm shooting for $100m in the first year".

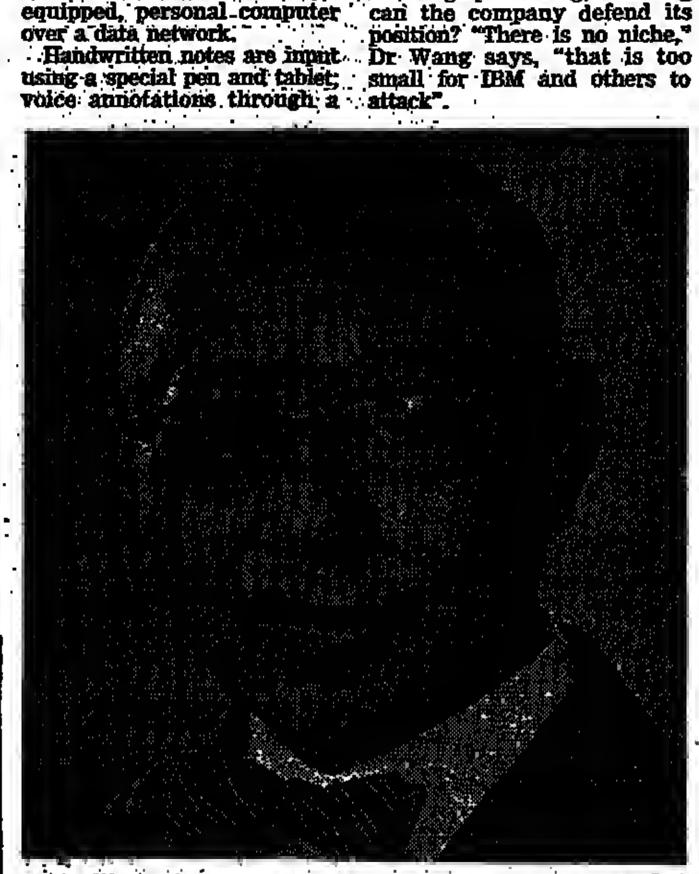
Key to his plans is a new product called "Freestyla," launched last November. Essentially it is special hardware and software that allows an ordinary personal computer to accept handwritten notes and voice messages and combine them with electronically-captured pages of data. The whole package can be transmitted to another, similarly equipped, personal computer over a data network.

Handwritten notes are input using a special pen and tablet; voice annotations through a telephone handset. Screen documents cen be moved, enlarged, "stapled" together or filed.

It is all a little closer to some conceptions of the electronic office. Wang talks of a handful of $1.5m pilot installations among major customers, but it is too early to say whether image will be the breakthrough for Wang in the 1990s that text was in the 1970s.

Even if the market is ready for image processing, how long can the company defend its position? "There is no niche," Dr Wang says, "that is too small for IBM and others to attack".

Frederick Wang, president and chief operating officer, with the Wang Freestyle personal computing system - "a major step forward" in capturing and manipulating images, he says.



Dr An Wang, the company's founder: taking a relaxed view

New record for IBM

GROUP TURNOVER for IBM (UK) for the yeer ended December 31, 1988, was £3.87bn, an increese of 11 per cent on 1987 — and a new record.

Home revenue improved by six per cent to £1.73bn, while exports ot goods and services improved by 17 per cent to £2.14bn.

Commenting on the results, Mr Tony Cleaver, chiet executive, saye: "In 1988 we met all our objectives and recorded the 36th euccessive year of revenue growth in the UK.

"Market demsnd was atrong across all areas of the bueiness, especially for eoftwere."

Profit after tax waa £327m, e five per cent increase on the 1987 figure of £311m.

IBM (UK) has 18,686 employees.

Worldwide revenues for IBM in 1988 amounted to £59.68bn, with net eernings of $5.81bn.

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The rise of local area networks

THE INSTALLED base of local area networks (LANs) in Western Europe will grow from 91,400 at the beginning ot 1988 to 586,000 by the start of 1994 — at an averege annual growth rate of 36 per cent, according to letest Telematica report from Logica.

Thie image of etrong growth Is diluted, however, by predictions thet the valua total of LAN shipments ($417m In 1988) will show only a 17 per cent growth rate through to 1993. The maturing of the market is ettracting meny eupplіers end Is forcing avarege prices down by around 15 per cent a year.

LAN manufachurers are polarising between eupplіers ot herdware — in particular, the edaptor cards — end of software, which provides the operation control of the network, says the report.

High supply is restricting margins on the hardware and the only volume suppliers will survive in this segment, it predicts. *For more details, see Page 8: Wedge bringing a divide in the market.*

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'Revolutionary' library system

VISITORS to Edinburgh City Libraries will be the first in the UK to benefit from a fully-integrated computerised library system, built eround the letest IBM technology and specially-designed application software.

The information system, designed to take the library service into the 1990s, will run on the IBM AS/400, with software supplied — known as 'Book' — by the IBM egent, Lychgate.

The software was developed in Australia and is now widely used there, es well as in New Zealand and Hong Kong. The system helps to perform all the routine tasks of librarians — from issuing books to consulting catalogues, as a fully automated function. IBM describes the development as "e milestone for the entire library service."

Larger modela of the AS/400 mid-range computer, launched In June last year, have the power and capability of sizeble mainframes.

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Exhibitions and conferences

THE Which Computer? Show is being held this week at the National Exhibition Centre, near Birmingham, until 4pm on Friday, February 24.

Among the forthcoming exhibitions and conferences for the computer industry in the UK are:

□ Dexpo Europa 89 at London's Olympia: February 28 to March 2, 1989 — this is the seventh European DEC-Compatible Exhibition, which is attracting more than 60 axhibitors, including a strong contingent of companies from the US. Appla Computer (UK) is appearing at Dexpo for the first time since announcing its technical collaboration agreement with Digital.

More details from Montbuild on 01-486-1951

□ UK regional events include the Business Communications Show Series in which 30 manufacturers in business computing and telecommunications are participating in e series of four regional shows in the UK.

The venues and dates are:

Bristol Exhibition Centre, March 7-9.

Solihull Conference Centre, April 4-6.

New Century Hall, Manchester, May 2-4.

Scottish Exhibition Centre, Glasgow, June 6-8.

Details are available from M.A.Enterprises on 01.262 3382.

□ The role of technology will be the key theme of an FT conference in London on 'Retailing in the '90s'; the event will be held on March 20 and 21 at the Inn on the Park Hotel.

Detalle on 01-925 2323.

□ The 1989 Computer Training Show at Olympia, from May 31 to Juna 2 will extend across the spectrum of servica provision and related products, including end-user training, project managemant, operator training and strategic planning in information technology.

Detaile from Montbuild on 01-486-1951.

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Expansion plans

Acer, Taiwan's lergast computer company with a turnover of $555m and a net income of eround $30m last year, ie alming to achieve revenues in excess of $1bn in the next two years, according to its chairman, Stan Shih.

The company is setting up a UK subsidiary, Acer International, as a marketing base for Britain and Scandinavia.

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European venture

CompuAdd, the US computer manufacturer, has opened its first European office — in Bristol. The Texan-based corporation, which selle large volumes of personal computers by mail order, will use similar retailing methods in the UK, with a sales target of $75m by 1991.

CompuAdd'a total turnover is now £250m.

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Database publisher

MIGENT UK has launched 'dbPublisher,' claimed to be industry's first detabase publishing product. Thie software development "turns drab computer print-outs into presentation- quality hard copy," says Migent.

With dbPublisher, an organisation can extract data from virtually any PC application and publish up-to-the-minute revisions, with customer-specific data.

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Low-cost PCs

AEG OLYMPIA, the West German office systems company, has introduced a family ot low-cost PCs, including the Olystar Falcon 20/3 20Mb hard disk/3.5-in. (720Kb) single floppy disc system, which sells for £998.It includes an eight-module software package, word processing, epell-check, database, spreadsheet and graphics facilities.

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Graphics system

TEKTRONIX, which had sales of $1.4bn in fiscal 1988, has launched a new colour graphics workstation, the 4319, priced at £9,995, suitable for architectural, civil engineering, mapping and graphic art sectors.

The new workstation, which eupersedes Tektronix' existing 4310 series, provides an entry point to the company's high-end 2-D and 3-D workstation family.

The company recently won an £840,000 ordar for graphics terminals from Graphic Information Systems, which specialises in management information and control systems.

ICL's European strategy

Wider product range planned

AS THE European Commission's market integration plan looms up in 1992, ICL has staked its future on its ability to expand on the continent. The company believes that the drive to reduce trading barriers will force a shake-out in the European industry as national *suppliers like itself are put* under pressure by foreigners invading their patch.

To be in the best position to fight this battle, it wants to hit back by pushing overseas itself.

Since launching its European strategy with a fanfare a year or so ago, however, ICL has found the going tough. The company already has a sizeable operation in France, where sales total around £70m a year, thanks largely to its expertise in supermarket systems; and it has acquired a 50 per cent stake in a Danish company, Regnecentralen, which has a turnover of around £50m in small computer manufacturing and packet-switching systems. But it still has a gaping weakness in West Germany, Europe's largest single computer market.

The strategy it has outlined to overcome these problems is based on its technological commitment to open standards and mid-range range computer market. ICL has opted for the Unix operating system, and taken a lead role in the rapidly-advancing European initiative to establish a common approach to computer design and communications systems.

This policy holds out more prospects of overseas expansion than trying to batter away in the mainframe area, where the customer-base is already in the hands of competitors.

In mid-range computing, the market is more open. Users are still exploring or entering this area; and since many of the systems are based on Unix, competitors can force even committed customers to change.

At the same time, ICL is working on a range of ideas for new products for the Europe of tomorrow. An integrated market, it believes, will need systems and software to run a co-ordinated transport system; it will equally need to revamp its customs and excise organisations on a a European rather than a national scale; and there will be a host of other opportunities.

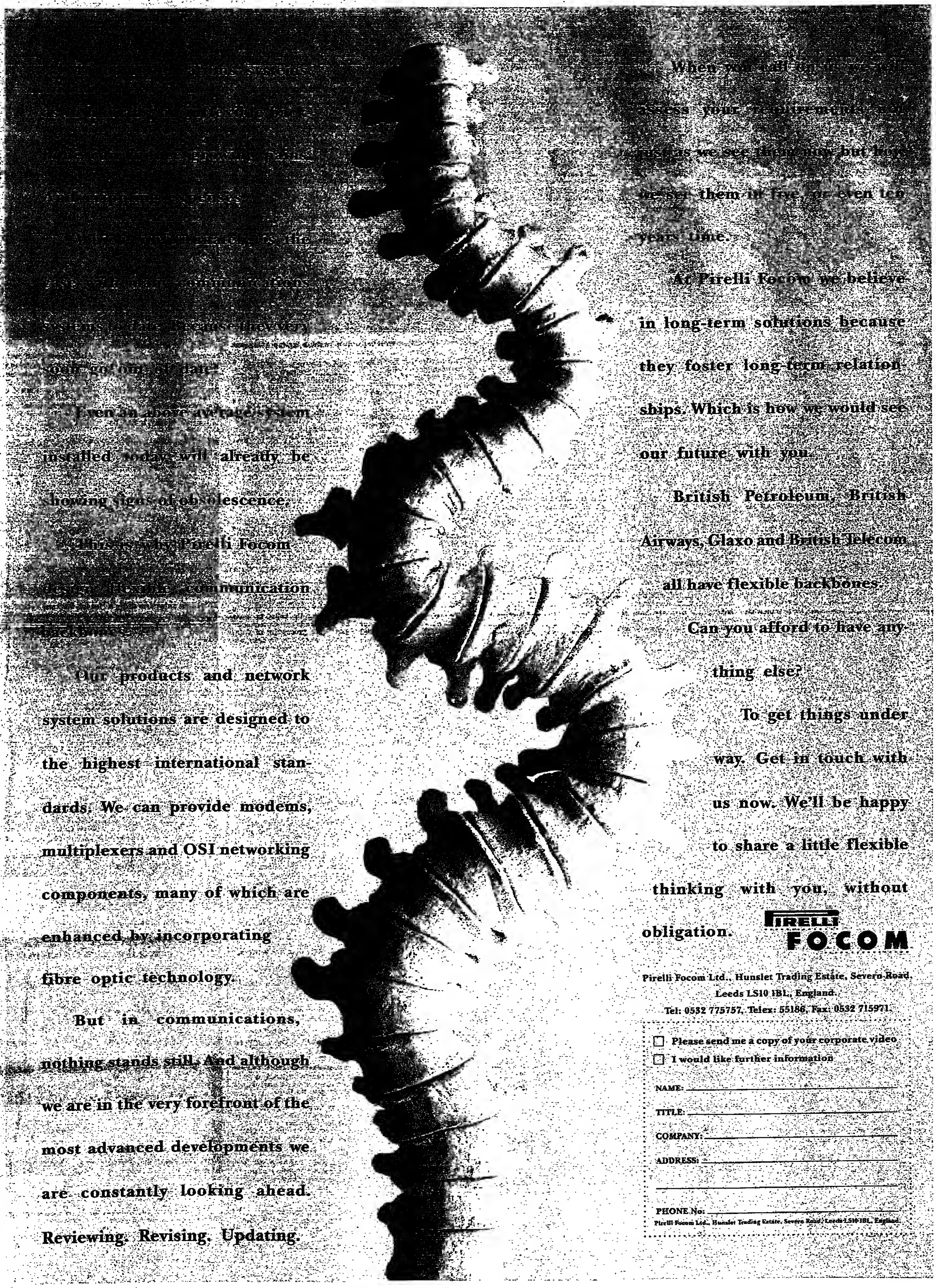
ICL has taken a lead role in a common European approach to computer design

All of these efforts are being co-ordinated through a European Strategy Board. The key to longer-term success may well be the ability of the Board to find the right targets for acquisition. So far, the going has been slow on this front. But it has been equally sluggish among the group's major competitors such as Siemens or Bull.

It is not beyond the realms of possibility that some of these larger groups may eventually be forced into each others' arms to solve the problem of market integration. After all, they each face a similar competitive challenge from suppliers who are already better organised in Europe than themselves — the American computer companies.

Terry Dodsworth

INTRODUCING A FLEXIBLE BACKBONE.



Advancing technology boosts sales of lap-top machines, says **Paul Abrahams**

The portable computer revolution takes hold

AS YOU sit in a US airport, waiting for air traffic controllers to give the go-ahead for you and your fellow travellers to board an already twice-delayed flight. it is obvious that the portable computer revolution is taking hold.

Across the departure lounge, wise and experienced businessmen sit crouched at telephone kiosks, their faces illuminated by the gleam of screens displaying databases of potential clients on their portable computers. You are trying to read a Robert Ludlum novel – they are making money. The portable computer has come of age.

Managers are using them in increasing numbers to continue working on word-processing, spreadsheets and graphics ontside the office. Surveyors and architects are tapping on keyboards to help control production on construction sites. And members of the financial and insurance community are finding that portable machines attached to modems can allow them to provide instant quotations and register sales immediately without paperwork.

The increasingly high profile of portable computers is hardly surprising, given recent sales. Intelligent Electronics, the Paris-based market research company, estimates that shipments of portables to Europe increased from 129,000 units in 1987 to 256,000 last year – an increase of 98 per cent.

Growth in the UK has also been impressive. Romtec, the UK-based market research company, believes that business sales of portable machines increased by 33 per cent last December compared to the previous month.

That sort of heady increase looks set to continue. Compaq, the US portable manufacturer, estimates that by 1989 sales of portables world-wide would be equivalent to 15 per cent of the total PC market.

There are a number of reasons for this rapid expansion. Not least among them is the improving technology available to manufacturers.

Mr Michael Goulde, a director of Cap International, the Norwell, Massachusetts-based hi-technology market research company, points out that there have been notable advances in storage capacity, power consumption of hard disks and the images generated by available display technology. This has been combined with an improvement in the ratio between price and performance.

These improvements in performance have meant that much of the expansion of the market has been in the battery-operated lap-top market rather than the mains-powered transportable sector. It is no longer necessary to compromise on the functionality of the machine in order to have battery-powered portability.

Compaq estimates that, next year, sales of lap-tops will be twice that of transportables.

The sort of lap-top portable machine which offers the full power of a PC, *does* have some draw-backs, however. Not least is price. Some of the machines at the top of the range remain particularly expensive.

The other compromise is weight. There still appears to be a market for machines, such as the Z88 lap-top supplied by Sir Clive Sinclair's company, Cambridge Computer, which offer reduced functionality (non-standard word-processing, spreadsheet and database packages), but which come with notable portability. The Z88 is the size of an A4 pad and weighs only 1Kg, (2.2lbs).

However, at present, the market in both the US and Europe remains dominated by Toshiba. Intelligent Electronics estimates that, in 1987, the company had 40 per cent of market. (Although figures are not yet available, it appears that Toshiba has increased that share during 1988.)

Mr Gordon Curran at Intelligent Electronics points out that Toshiba were able to gain much of that share by infiltrating more than 80 per cent of the IBM distribution network in Europe – one of the best and most extensive in the region. Toshiba's nearest competitor is Zenith.

However, the rapid growth of the portable market may not mean that the majority of the manufacturers in the sector will be able to continue generating healthy margins and profits.

Analysts point out that as other sectors of the computer sector become less buoyant, so other companies will be attracted into the portable market.

The lap-top sector, which is expected to generate much of the expected growth in the portable market, is already becoming busy if not yet over-crowded. Compaq, which had previously not entered the lap-top field, launched a new machine, the SLT 286, last November.

Intelligent Electronics expects the company to be a major force in the market next year. Other companies expected to launch products this year include NEC of Japan and Apple Computer, the Californian-based computer company.

Cambridge Computer, the UK manufacturer, is also expected to announce the introduction of an IBM-compatible machine. It is believed to have signed a contract for 3 inch disk drives. Analysts believe that if the company is able to repeat the lightness and price of the Z88 with the functionality of an IBM-compatible machine, it could become a force in the market.

The industry is also waiting to see how IBM, itself, will move. The company has already launched two unsuccessful portable products. Last November it cancelled the introduction of a mains-powered machine after failing to read the movement of customer demand towards battery-powered products.

IBM runs the risk that if its product cannot compete effectively against the computers of Toshiba and Compaq, the company might not be able to guarantee 100 per cent distribution among its own dealers. Analysts are divided as to whether IBM will launch a product towards the end of 1989 or wait until the company has perfected a competitive machine incorporating its new operating syst em OS/2.

With so many companies exploring the market, the future of portable computing appears assured. Other concerns are also considering entering the field with new technologies. Both Hitachi and NEC of Japan have demonstrated colour liquid crystal displays (LCDs), for example. They should be commercially available once their cost has been reduced sufficiently to allow exploitation.

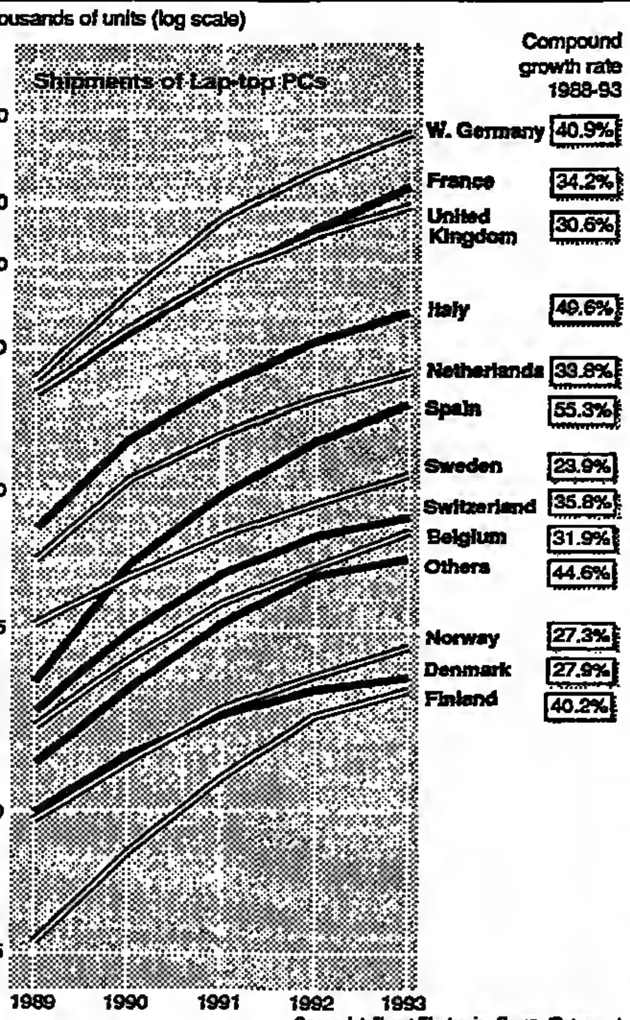
However, it remains to be seen whether Toshiba's vision of lap-top computers, which, the company believes will replace desk-top machines, will materialise.

Mr Peter Bayley, marketing director at Compaq UK argues that computer users will always want greater power, memory and function before it can be miniatured. He says that new developments will always appear in desk-top machines before portables.

One aspect of portable computers which may eventually hold up the growth of the market may, in fact, be the very portability of the product. Such high-value products are beginning prove all to easy for thieves to walk away with; certainly, those businessmen at US airports tend to keep a careful eye on their machines.

Market growth

Thousands of units (log scale)



Source: Intelligent Electronics Europe/Dataquest

Airborne executives working with a Toshiba lap-top computer. Toshiba is the dominant player in this sector

Travelling salesman using a Hewlett-Packard Vectra lap-top PC

The European lap-top market

■ The total European market in 1987 was 128,880 units. The list below is in value terms.

1.Toshiba, 40 per cent.
2.Zenith, 12.5 per cent.
3.Olivetti, 9.2 per cent.
4.IBM, 4.5 per cent.
5.Wang, 3.5 per cent.
6.Hewlett Packard, 3.0 per cent.
7.Grid, 2.4 per cent.
8.Sharp, 2.7 per cent.
9.Ericsson, 2.6 per cent.
Others: 19.2 per cent.

Source: Dataquest/Intelligent Electronics, 1988.

SECTION IV

FINANCIAL TIMES SURVEY

The *fragmented* design world is being swept by change: a new generation of ambitious companies is scrambling to assemble international design networks. The next few years will decide whether all this activity has been worthwhile, writes Alice Rawsthorn

Drawing plans for the world

FOR DECADES design has been an archetypal cottage industry in which artisans and entrepreneurs have practised their craft within small companies.

But the industry is changing. In the last year or so the world's design consultancies have become embroiled in a flurry of acquisitions and associations as a new generation of more ambitious companies has scrambled to assemble international design networks.

The aim of the flurry is simple: The activities of the giant industrial groups which commission design projects are becoming increasingly international. Yet the "cottage" character of the design industry means that there are comparatively few design companies with the resources to execute international projects.

Over the next few years it will become apparent whether the acquisitions and associations have been worthwhile. The critical question for the design companies is whether there is enough demand to satisfy the hastily assembled international networks and whether design can overcome its traditional weaknesses to "mature" into an international industry.

Throughout the 1980s the level of spending on design has risen rapidly. Frenetic corporate activity across the world's stock markets — the flood of takeovers and leveraged buyouts in the US and the flurry of mergers and amalgamations that have heralded the approach of 1992 in Europe — have accentuated the need for companies to invest in corporate identity programmes.

Similarly the increased sophistication of consumers, combined with the rapid rise in advertising costs in most major economies, has stimulated new interest in product and packaging design. The only depressed area is retail design.

The fragmented nature of the design industry means that any data is notoriously inaccurate. The best estimates suggest that the world market for industrial design and commercial architecture is worth £6bn. Interior design, which includes retail projects, is valued at about £1bn. Product and graphic design, including corporate identity, meanwhile, is worth £900m. The rest belongs to commercial architecture.

In recent years the ambit of industrial design projects has become increasingly international. Japanese companies now need to redefine their identities to accommodate expansion into North America or Europe. French and West German groups are developing new products to be introduced throughout the European Community.

"Most of the major industrial groups are now positioning themselves all over the world," said John Diefenbach, president of Landor International, which operates a world-wide design network from San Francisco. "They need to deal with consultancies capable of providing a sophisticated service wherever they operate."

In the past the bigger US and UK design companies have handled international projects from their headquarters in New York or London. But the sheer speed of the restructuring of international industry — the recent activity in European electronics acts as an apt example — means that design companies must be far faster and more flexible in their response.

Moreover, design projects are becoming increasingly sophisticated and the process of project implementation more complex. "The days when we could fly people out to different countries to oversee the implementation of a corporate identity programme are over," said Brian Boylan, group managing director of Wolff Olins, one of London's leading corporate identity consultancies. "We now need people on the ground with the necessary skill to supervise very complex programmes."

Yet few design companies can offer such a service. The design industry is reasonably well-established — albeit immature compared to similar sectors such as advertising — in the US and the UK. There is no industrial infrastructure for design in many European countries. Even in Italy and West Germany, both renowned for product design, the best known designers, such as Dieter Rams of the Braun consumer electronics group, tend to be employed in-house.

This imbalance between demand for international projects and supply, together with the need to remain competitive within the industry, has catalysed the recent wave of realignments in design.

The acquisitions and associations are also a legacy of the emergence of a new generation of design companies with access to the financial resources required for international expansion.

In the mid-1980s a group of UK design companies took advantage of the opening of the Unlisted Securities Market — a less stringent, secondary stock market — to go public. A public quotation has not only given these companies the capital they need to expand, but has also increased the pressure on them to sustain growth by diversifying into new areas.

Fitch-RS, which made its name in retail design, has bought RichardsonSmith, the US product design company. "We realised some years ago that we could not depend on UK retail design for ever," said Ian Cochrane, group managing director.

Similarly Michael Peters, best known for packaging, has done a series of deals culminating in the acquisition of Hambrecht Terrell, the US retail design group, last year.

The expansion of Fitch and Michael Peters has encouraged the independent UK companies to follow suit. Wolff Olins has established offices in mainland Europe and the US. Minale Tattersfield has formed a string of associations.

Perhaps the most dramatic development in the industry is the arrival of the giant marketing services groups. To companies such as Saatchi & Saatchi and WPP, design is a logical addition to their existing advertising, public relations and market research activities.

Saatchi ventured into design in 1985 by buying Siegel & Gale, the New York corporate identity specialists. WCRS staged acquisitions in the US, UK and Australia. Meanwhile, Addison Consultancy has augmented its international design network.

The most powerful force of all is the WPP Group which, in a few years, has become the biggest single player in the international design industry by buying businesses like Anspach Grossman Portugal, Walker Group/CNI in New York and Stewart McColl in London.

Many of WPP's new subsidiaries are now using its support to establish an international presence. "When we bought CNI in 1985, I raised the money by hocking my house," said Ken Walker, chairman of the Walker Group. "You do not sleep easily knowing you owe more than your own net worth. The involvement with WPP not only gives us more stability but an established network of international offices to support us."

Even at this early stage the progress of the international design groups has been somewhat erratic. The immaturity of the industry means that recruitment is a persistent problem.

Moreover, demand for design is notoriously volatile, as the retail designers of the US and the UK are now discovering. In theory the formation of larger groups, with more efficient management and tighter financial controls, should strengthen the industry. In practise life has not been quite so simple. For every international group that can cite a startling surge in fee income, there is another which is suffering.

WCRS wetched the profits from its newly acquired design subsidiaries drop dramatically last year. A few weeks ago it sold Saunders, its UK design company. Similarly Addison has been involved in successive rounds of restructuring.

Meanwhile Michael Peters has encountered problems with the recently acquired Hambrecht Terrell, which is floundering partly due to the downturn in US retail design and partly because of the illness of one of its founders.

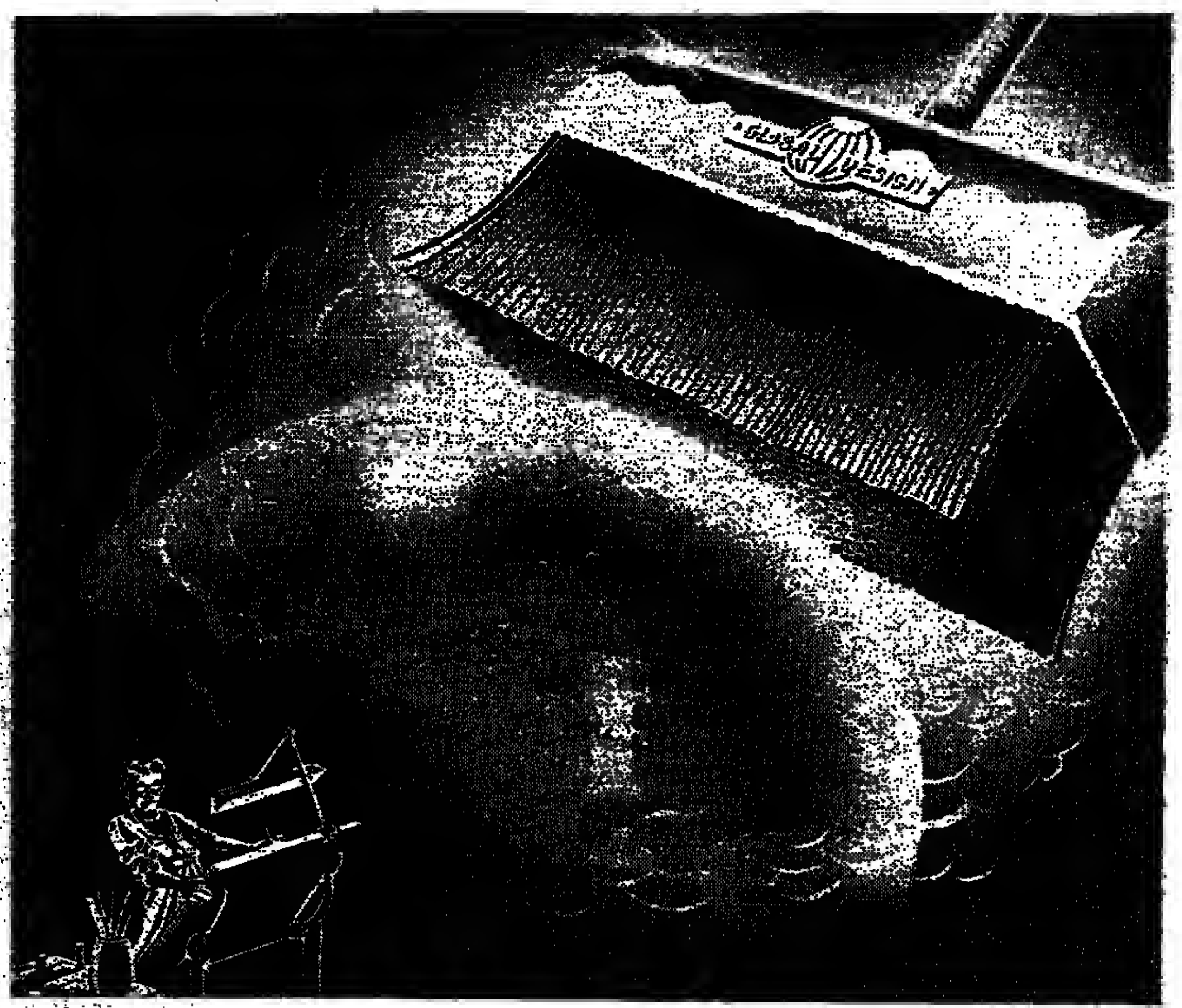
The industry's sceptics suspect that the problems with new acquisitions have barely begun. The crunch will come, or so they say, in a few years time when the performance-related payments negotiated as part of the original deals come to an end.

Neil Blackley, who follows the fortunes of the design companies as an analyst at James Capel, the London stockbrokers, is dubious that the design industry will ever overcome its traditional weaknesses.

"There are opportunities for international groups to emerge in certain areas, such as corporate identity and retail," he said. "But as long as the cost of entry is so low that young designers can break away from the big groups and set up on their own, design will be an immature industry."

Yet the flow of acquisitions and associations continues unabated. Retail design apart, there is no sign of a slowdown in the growth of corporate expenditure on design. And the sheer speed of corporate activity in the industry has intensified the pressure on other companies to expand in order to keep pace with their competitors.

"If you want to keep yourself and your employees happy in this business you have to work on the biggest and best projects," said Joel Portugal, a principal of Anspach Grossman Portugal. "The best projects today tend to be international and — whether we like it or not — we have to provide an international service to get them."



International Design Industry

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Illustration: Mark Thomas

US: design is taken more seriously than in Europe

Lining up to profit from identity parade

DESIGN is a serious business in the US: the industry is not only the biggest and slickest in the world but is taken much more seriously than its European counterparts as an industrial and cultural force.

There is, after all, one of Arthur Young's Bell helicopters suspended from the ceiling of the Museum of Modern Art in New York. And the shiny red paint of Pinin Farina's Cistalia sports car marks the entrance to the museum's architectural and design department.

Better still, from the design industry's perspective, Harvard Business School has just introduced corporate identity case studies to its MBA syllabus. The future chairmen and chief executive officers of corporate America will be subjected to a corporate identity sales pitch at the earliest possible stage of their careers.

But behind the rosy façade of buoyant demand and MBA case studies, the US design industry is in a state of flux. In recent years many of the most prestigious names in US design have been bought up by UK design companies and the international marketing groups.

During the same period the leaders of the US industry have turned their attention outside the US as, through a series of acquisitions and associations, they have fought to become forces in the international design market.

The origins of US industrial design are rooted in the efflux of *emigrés*, which left Europe for North America in the mid-war years. These people made their names in different areas of design. Some worked on a freelance basis as "pure" designers. Others, like Raymond Loewy and Walter Landor, laid the foundation for the modern design industry by building up substantial businesses.

The distinction between the "pure" designers and design as an industry persists today. At a time when the US design industry is bigger and more business-like than ever before, the most talked-about interior in New York is that of the Royalton Hotel, the work of Philippe Starck, the French designer.

So far the 1980s have been prosperous years for the $5.25bn (£3bn) US design industry. Corporate identity has been buoyed by the high level of corporate activity: wave after wave of acquisitions; the influx of investment from Europe and Japan; the expansion of US companies overseas; together with the omnipresent threat of takeovers.

"Corporate identity is now taken more seriously than before and the financial pressure on US companies has never been greater," said John Diefenbach, president of Landor, one of the leading corporate identity consultancies.

Similarly the fragmentation of consumer markets has boosted demand for product and packaging design. This trend, together with the soaring cost of advertising, has prompted consumer goods companies to reposition and repackage their products.

"The area of brand identity must be one of the fastest growing areas in the future," said Joel Portugal, one of the founders of Anspach Grossman Portugal, the corporate identity specialist which now belongs to the WPP marketing empire.

The only area to have experienced real difficulty is that of retail design. The retail boom of the early and mid-1980s turned to bust in the US last year, when lack-lustre sales and frenetic corporate activity depressed demand for design projects.

"Last year was probably the toughest-ever for retail design," said Ken Walker, chairman of Walker Group/CNI, the WPP subsidiary which is one of the largest US retail design companies. "The market is starting to pick up, but lots of the smaller companies are still vulnerable."

The recent difficulties of the retail design specialists acted as a neat example of the problems which await an industry that has become accustomed to apparently effortless growth. These difficulties have been compounded by the fragmented structure of the industry.

For, despite the size and slickness of the larger companies, the US industry is still divided between hundreds of different companies. Design styles vary from coast to coast and even from state to state.

The most concentrated area of design is corporate identity which is dominated by four forces: Anspach Grossman Portugal, Landor, Lippincott & Margulies and Siegel & Gale. So far the international investment in the US design industry has been concentrated on corporate identity.

Harvard has just introduced corporate identity case studies to its MBA syllabus

Saatchi & Saatchi became the first of the marketing super-groups to stage a major US acquisition when it bought Siegel & Gale in 1985. Last year it added to its US interests with the acquisition of Cross Associates in Los Angeles.

A year ago WPP – the marketing services group led by Martin Sorrell who, in his former guise as Saatchi's finance director, negotiated its acquisition of Siegel & Gale – moved into US corporate identity by buying Anspach Grossman Portugal.

Helped by the financial resources and the management infrastructure of their new owners, Siegel & Gale and Anspach Grossman Portugal are now expanding internationally. "For the first time we are dealing with global identity programmes on a large scale," said Alan Siegel, chairman of Siegel & Gale. "As a design company we have to organise ourselves to take on those programmes."

Siegel & Gale has already expanded in the US and has opened a string of European offices. By the end of the year it will have moved into Asia-Pacific.

Anspach Grossman Portugal's plans are less ambitious. "Whoever said that biggest is best?" said Joel Portugal. "The fun part of my job is working on the most exciting design projects, not trying to run a business empire."

Nevertheless Anspach Grossman Portugal became involved with WPP because it realised it needed to expand into the international sphere. It intends to have opened a European office, possibly by acquisition, later this year.

Conversely several European consultancies are strengthening their presence in the US. Pentagram has already established bases in New York and San Francisco. Addison has staged a series of US acquisitions. Wolff Olins has set up a small office in San Francisco and is now looking for a bigger base on the East Coast.

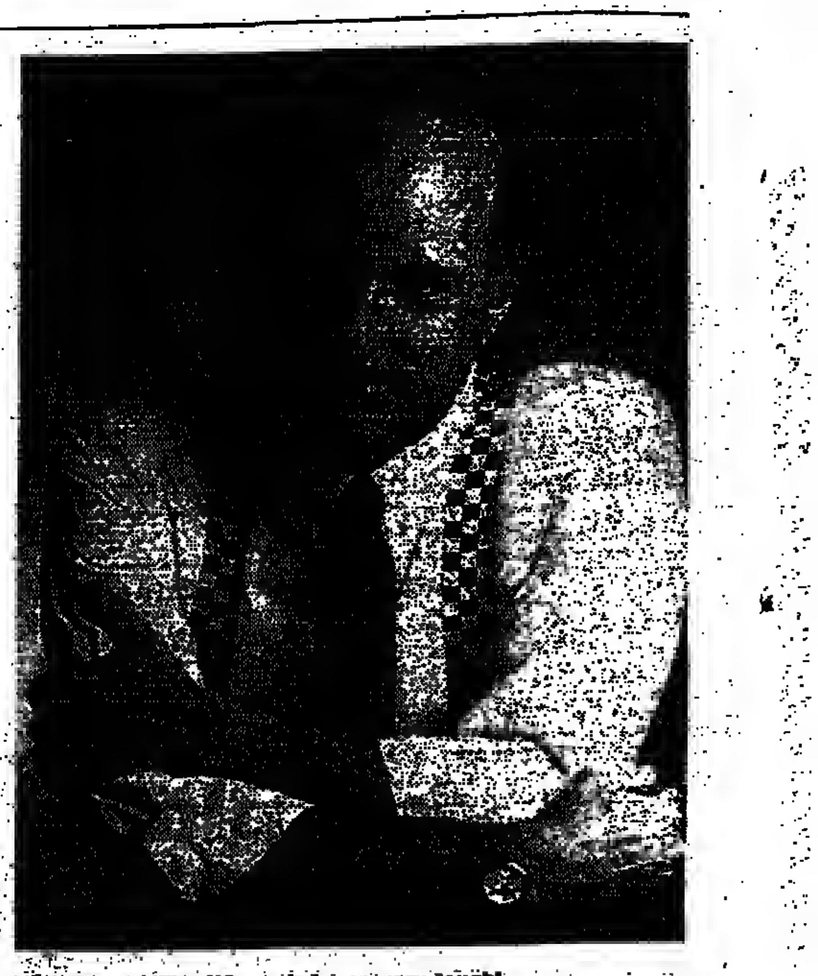
The pace of international investment in other areas is also accelerating. Fitch, the UK consultancy best known for its retail work, intends to expand in that field in the US by using RichardsonSmith, its recently acquired product design subsidiary in Ohio, as a base.

Similarly, Michael Peters, which made its name in UK packaging design, has bought Hambrecht Terrell International as its springboard in the US.

Meanwhile Walker Group/CNI has used the support of WPP, its new owner, to establish its presence in retail design in Tokyo and London. Given that the US retail design market declined so dramatically last year, Walker's international expansion was opportune.

"The US market was very tough but our international growth more than offset it," said Ken Walker. "And without the support of WPP we could not have developed our international business so quickly."

Alice Rawsthorn



Ken Walker: 'The US market was very tough'

UK: a highly fragmented industry hungry for future growth

Experience competes with appearance

AS THE growth of the UK design industry shows little sign of abating, the strengthening chorus of "design or decline" is beginning to sound a little off-key. It implies a degree of homogeneity, shared views and standards that simply does not exist.

From the outside the 2,000 or so companies in the UK design business may appear to be singing from the same song sheet. But on closer inspection it becomes plain that the words mean different things to each of them.

A picture soon emerges of a youthful and highly fragmented industry, hungry for further growth in turnover and profits. As a result, some of its more intelligent spokesmen are worried that the superficial and greedy operators are doing the rest of the business a disservice.

The industry operates in three main areas: graphics, which can range from packaging to a corporate identity programme; environments, which includes office interiors and retail design; and products, which covers consumer goods and industrial parts.

Stephen Bayley, chief executive of The Design Museum, is concerned that a certain interpretation of design has been oversold to the detriment of those professionally involved in it.

"The emphasis nowadays and in the future will be as much on experience as appearance," says Mr Bayley. There are certainly indications that buyers of design are becoming more discerning. At the same time, some design companies are developing a level of sophistication and management control previously unheard of in Britain.

The rabble competing for design work ranges from jobbing designers and "kiss and run merchants" to professional specialists and slick international consultancy groups. Since a project can describe anything from an overnight revamp of a point of sale leaflet to the introduction of a 500-strong chain of shops, the size of the British design market is difficult to calculate.

It is known to be bigger than public relations and market research and growing at a faster rate than advertising. In her report for the Design council, Beryl McAlhone valued the UK design market at £1.7bn with profits of £267m for 1987 and suggested a growth rate of more than 25 per cent in turnover and more than 30 per cent in profits. These are still the most authoritative estimates.

But the national barriers are breaking down. The Americans, such as Landor Associates, Saatchi and Saatchi-owned Siegal and Gale and WPP-owned Walker Group/CNI have toughened up the competition in the UK and some British companies are making their presence felt on the other side of the Atlantic, primarily through acquisition.

Many of the largest and oldest players in the business firmly believe that a "superleague" of global design companies will emerge and are racing to build international networks. Here the long-established design companies like Fitch R-S, Michael Peters, Pentagram, Wolff Olins and Minale Tattersfield, are competing with a cluster of marketing service groups, including WCRS, Saatchi and Saatchi, Addison and WPP.

WPP's chief executive, Martin Sorrell, has been leading the acquisition activity by buying businesses like Anspach Grossman Portugal and the Walker Group/CNI in the US and Stewart McColl Associates, OYA and Sampson/Tyrell in the UK.

Interestingly, though, the fiercest battle between the British and American companies looks set to take place in Europe. None of the British companies are properly established on the Continent yet, despite the fact that it accounts for a significant amount of their work.

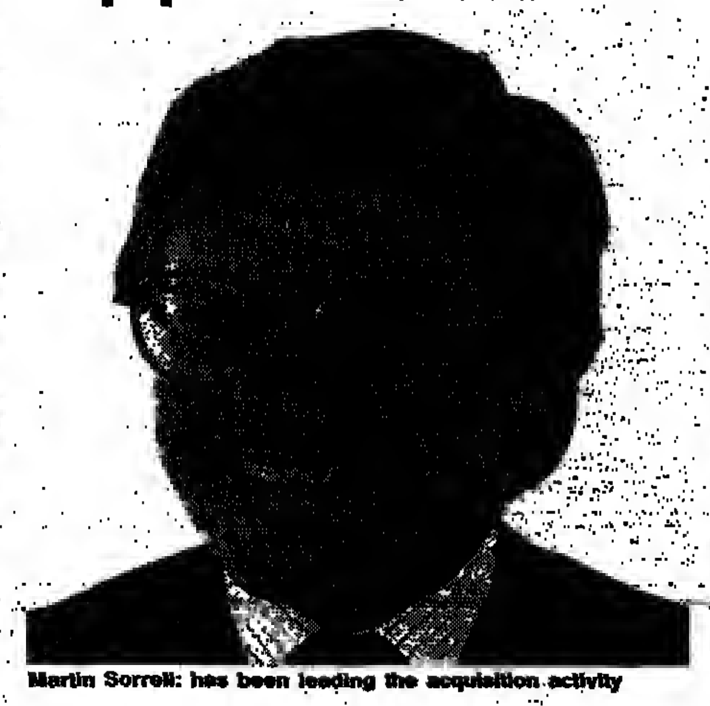
By contrast European design companies have had very little impact on the UK and are unlikely to do so. In no other country are there so many large, profitable or publicly-quoted design companies in relation to the size or the economy. The influence and reputation of British design in packaging, retail and identity, has never been higher.

In packaging, leading domestic companies like Lewis Moberly, Robinson Lambie-Nairn and Smith and Milton, are all carrying out an increasing amount of work in Europe. The approach of the single European market, the awareness of the value of brands, and the continual re-packaging programmes of some of the UK's biggest retailers and financial service companies, means that the top British packaging companies can find themselves actually resisting growth.

Robinson Lambie-Nairn, which undertakes identity and TV work as well as packaging, has a policy or keeping its staff to a maximum of 35 people. The argument that size leads to sacrifices in creativity is still widespread.

Ironically, however, in the retail sector it is the small companies that are most at risk. The downturn forecast in retail spending is likely to hurt the small operators far more than the big ones which have moved beyond the high street.

Fitch R-S and McColl, for instance, are increasingly competing with architectural practices like the Building Design Partnership and YRM, for long-term projects from shopping centres and airport terminals to the re-design of parts of London. McColl has recently been appointed to work on a new look for London's Oxford Street and, together with DEGW, the London Underground stations.



Martin Sorrell: has been leading the acquisition activity

Big retail design companies are also benefitting from the activity in the financial services market. So while Fitch R-S is re-designing the Midland Bank's high street branches, McColl is working for the Leeds Permanent Building Society. The project for McColl is not simply to smarten up the Leeds' branches, but to create a new identity which could even lead to a name change.

It is the area of identity, where design companies deal with the very senior reaches of the client organisation, that the Americans are most keenly competing. The furore surrounding Landor Associates' re-design of the British Airways identity in 1984, was almost equalled by the unveiling of the new BP logo last month, which was updated by the Saatchi-owned US company Siegal and Gale.

The hostility from parts of the British design community to American identity work reveals, more than anything else, a deep-seated insecurity since it is an expanding sector and there is more than enough work for the British corporate identity firms.

In addition to their traditional areas of activity, in finance, commerce and industry, the public sector is now turning to identity consultants. Wolff Olins, for instance, has completed jobs for the Department of Trade and Industry, the Department of Employment, the Department of Health and Social Security and even started a project for the Metropolitan Police. Meanwhile, the soon to be privatised electricity sector is producing work for Wolff Olins, Lloyd Northover and Pentagram.

Significantly, product design lags behind the other disciplines. World reputations are confined to a handful of individuals, notably Mr Kenneth Grange of Pentagram and Mr Nick Butler at BIB, who derive a high proportion of their fees from Britain's global manufacturing competitors, particularly Japan, Italy and Germany.

Overall, the British design industry is looking very strong. The share prices of the public companies have fallen due in part to a suspicion of small people businesses and some setbacks experienced by some of the players. Earlier this month, for instance, WCRS sold off Saunders Design only three years after it has purchased it for £600,000 announcing that it did not believe Saunders "was structured to grow to the necessary scale. In the same week it emerged that three senior people at Michael Peters were breaking away to form their own company.

The opportunities for UK design consultancies are enormous. One of the biggest problems facing the leaders over the next few years will be how best to manage their growth into new disciplines and new countries. Chanting "design or decline" is not the answer.

Rufus Olins

Deputy editor of Campaign

The major advertising and marketing groups have added design to their services

Multinationals demand world approach

Maurice and Charles Saatchi: they offer a global reach

DESIGN is a $65bn world-wide industry and growing fast. Yet, while it remains largely split between thousands of small, specialist firms in many different countries, the needs of its major clients are changing.

Increasingly, the activities of the industrial groups, which are its most important customers, are becoming global. These multinationals need design companies capable of handling complex world-wide projects.

Little wonder that in this situation, major advertising and marketing groups, such as WPP and Saatchi & Saatchi, have seen an opportunity, and added design to their wide range of marketing services.

Martin Sorrell's WPP group now includes nine design companies, the major part of a non-media advertising division which in 1987 contributed 18 per cent of WPP's £284m turnover, and 14 per cent of its £14m profits.

Early last year WPP bought Stewart McColl Associates, a leading UK integrated design company. The acquisition created the largest graphics and design group in the country, and with two other WPP subsidiaries, OYA in the UK and Walker Group in the US, formed the largest retail design group in the world.

Later in the year, WPP was in the market again, buying the US-based corporate identity consultancy, Anspach Grossman Portugal. The US corporate identity market, WPP estimates, is worth around $250m a year and is growing at more than 20 per cent annually. Last year no less than 1,864 US companies changed their names.

Also in the WPP stable are Sidjakov Berman Gomez, a US firm specialising in total communications planning, everything from corporate identity to retail facilities and package design; and in the UK, office and commercial interiors specialist, Business Design Group; "image managers" Sampson/Tyrrell; and packaging and promotion specialists, VAP and Greaves Hall.

The companies are encouraged to retain their own identities and sharpen their own professional skills while WPP provides overall strategic management, resources and financial discipline.

But Stewart McColl has formed a joint marketing company with Business Design and a joint venture with Walker Group/OYA to exploit opportunities on both sides of the Atlantic by offering clients an integrated approach to their design needs.

WPP admits that it still faces a challenge not only in harnessing all its non-media activities to meet client needs, but in developing greater co-ordination between its advertising and design activities.

Yet, it argues: "It is in the nature of specialised, service companies to excel in one such category but seldom, if ever, in all. The client company, therefore, is faced with the need to choose many outside partners, of different skills, from a bewildering number of alternatives; and then to ensure that they work together to a central and commonly agreed strategy.

"Within the WPP Group, there are now specialist companies providing all the marketing service skills required by national and international clients ... For clients, this provides the reassurance of the highest professional standards — in all skills and disciplines —, and the stability that derives from being part of a large public company.

"The need to co-ordinate and integrate selectively corporate strategy and communications is becoming widely recognised. Clients are restructuring and reorganising themselves to this end — there are many benefits and efficiencies to be gained. And they will be looking for service companies which, with no loss of capability, can work harmoniously together to a common brief and with shared understanding."

The group now works with 214 major national or multinational companies in two or more of its services; and clients such as Unilever, Citicorp, Nestlé, Quaker Oats, and Eastman Kodak use WPP's design capabilities as well as its other services such as advertising and public relations.

WPP — "a financial brand", as Martin Sorrell describes it — sees its inclusion of design in an integrated service as vastly different from Saatchi & Saatchi's one-stop shopping approach, which offers design among a menu of services.

But when Alan Siegel agreed to the takeover by Saatchi of his US-based design company, Siegel & Gale, in 1985, he did so to gain much the same benefits that are now accruing to WPP's design firms from being part of a large group.

"It was increasingly clear to me that the corporate identity business was becoming multinational," he says. "Global companies were emerging that were concerned about their world-wide identities. To work with them and service them properly was going to be difficult from New York. It needed a broader geographical base, staff with a greater breadth of culture and viewpoints."

Saatchi offered a global reach and a strong business base, says Siegel. "But they let you run your own company."

Saatchi is now building an international design network around Siegel & Gale. It has tripled in size since its acquisition, opened offices in London and Sydney, and plans to be in eight European countries as well as Japan and Korea by the end of the year.

Corporate identity forms the bulk of S&G's work but it is fast expanding into retail design and other fields, planning not only to increase its cross-border business but to compete in all major national markets where design is increasingly being used as a marketing tool.

The structure of a large marketing group should help to strengthen its design subsidiaries but it is no guarantee of success.

In contrast to WPP and Saatchi, the British advertising group, WCRS, in two years has failed to secure significant profits from its venture into design. In 1987-88, profits fell from £900,000 to £229,000. Saunders Design in the UK lost a large contract. Lunn Dyer in Australia found market conditions tough, and Heller Breene in the US, though growing fast, was noted by Ad Week Magazine for its advertising rather than its design work.

Peter Scott, WCRS chief executive, recently made clear that he sees the group's main three businesses as advertising, media-buying and public relations. A few weeks ago WCRS reduced its exposure to design by selling Saunders. It is likely to retain a presence in the industry, but the expansion of its design interests is not one of WCRS's priorities.

Addison Consultancy is pursuing a contrary course. Last year, it demerged its Michael Peters consultancy business, and it followed that by selling its advertising agency, Chetwynd Haddons, last month to the Brunning Group, so that it could concentrate on its market research and design operations.

Against a background of constant takeover speculation, Addison has restructured its design companies in the UK, and in the US and Singapore. Its strategy now is to seek a competitive edge by putting together teams of designers in the entire range of disciplines from architects and ergonomists to product and packaging.

This is a response, Addison claims, to clients' needs. It cites the case of Advantage, a new US supermarket, where it named and designed the store, researched consumer demand, developed an entire product range to meet it, packaged it, and finally designed the check-outs.

By going back to its design roots, offering a full range of skills and, it claims, a European creativity allied to an American commercial and research expertise, Addison believes it can carve out a big share of a very competitive market. But the takeover rumours persist.

Philip Rawstorne

PROFILE: SIEGEL & GALE

Alan Siegel: opening offices in Hong Kong and Tokyo

'Simple is smart'

TWENTY years ago Alan Siegel gave up his job with a design consultancy to set up his own company, with a friend, from the living room of his appartment on 74th Street, New York.

Today he runs the same company from an office in an Avenue of the Americas skyscraper. The walls are lined with Irving Penn portraits and the windows look on to the New York traffic as it streams towards the greenery of Central Park.

The company, Siegel & Gale, is the chief design subsidiary of Saatchi & Saatchi, the world's largest marketing services group. It employs 230 people at offices in New York, San Francisco, Los Angeles and half a dozen European cities. By the end of the year it will complete the formation of its international design network by opening offices in Hong Kong and Tokyo.

In 1969 Siegel & Gale had "no clients and no offices". Alan Siegel and Robert Gale — the original partner who sold his interest in 1976 — "pounded the pavements looking for work".

Corporate identity was then in its infancy. In the early days Siegel & Gale worked on piecemeal projects for small businesses and political organisations. After six months it was given a project in South America for Uniroyal, which had been one of Alan Siegel's former clients.

It was in the mid-1970s that Siegel & Gale really found its feet. First it won a competition to devise a new international corporate identity for Pitney Bowes. Then it moved into a new area — language simplification — for which it is now best known.

The involvement with language simplification began when Alan Siegel saw some of the loan agreements used by Citibank, one of the company's clients. "Citibank was presenting itself to the public as an accessible bank, but its loan agreements were complex, confusing and full of legalese," he said. "I rewrote them in a clear, more accessible way."

Citibank accepted the rewritten agreements. Siegel & Gale formed a language simplification division to specialise in the drafting of legal and commercial documents. The division has since "simplified" everything from the Dutch Revenue Service's tax forms to the New York telephone bill. It provided 30 per cent of the company's $20m (£11.5m) fee income last year.

The underlying principle of language simplification now defines all the company's work. Siegel & Gale has adopted "simple is smart" as its clarion call.

By the mid-1980s Siegel & Gale was established alongside Anspach Grossman Portugal, Landor and Lippincott & Margulies as one of the leaders of US corporate identity. It sported a string of blue chip clients and employed 60 people at its New York office.

Alan Siegel was convinced that the company's future lay in the international arena. He was also aware that it would be far easier to expand into other countries if Siegel & Gale could call upon the support of an established international infrastructure. In 1985 he sold the company to Saatchi.

By the mid-1980s Saatchi had already steamed past its competitors to become the biggest advertising agency in the UK. It had also embarked upon the international expansion programme which was to transform it — through a series of acquisitions — from an ambitious UK advertising agency into an international marketing services group.

Saatchi's expansion was based on the assumption that the same industrial groups that called upon the services of an advertising agency, would need public relations, market research and political lobbying too. Design looked like a logical addition to its portfolio.

Just as Saatchi had assembled international networks of advertising agencies and public relations consultancies, so it intended to become an international force in design.

As soon as the Saatchi deal was settled, Siegel & Gale began to expand from New York into other cities. Its international expansion has, however, taken far longer and been much more difficult than it initially expected.

The expansion has been hampered by internal problems. After the acquisition of Ted Bates in 1986, Saatchi was preoccupied by the problems of restructuring its advertising activities. Similarly Alan Siegel found it difficult to divide his time between the demands of building an international network and managing the existing business.

But the principal problem was the immaturity of the design industry. Siegel says he found it difficult to find the calibre of people needed in other countries and to identify suitable acquisitions.

As a result Siegel & Gale's international expansion has been a time-consuming combination of acquisition and start-ups. It set up its own business in San Francisco, but bought Cross Associates - eventually to be renamed Siegel & Gale - in Los Angeles. It set up on its own in London and Madrid and "inherited" offices in Copenhagen, Oslo, Stockholm, Hamburg and Sydney as a legacy of Saatchi's acquisitions. By the end of this year it should have opened offices in Italy, Japan and Hong Kong.

Almost all the offices are full service design consultancies. Alan Siegel is convinced that the company could not attract the kind of people it needs if the role of its international offices did not include the creative work and was restricted to sales and project management.

Siegel & Gale is also expanding its activities outside corporate identity. Whereas as other identity consultancies — like Landor in San Francisco and Wolff Olins in London — have diversified into different areas of design, it is concentrating on other "corporate" activities such as advertising and desk-top publishing.

Yet Siegel & Gale's chief challenge is in the international arena. It already derives about 35 per cent of its fee income outside the US. Once the international network is established, Alan Siegel expects that proportion to rise rapidly. It will then become clear whether Siegel & Gale can really rival Landor as a truly international design consultancy.

Alice Rawsthorn

PROFILE: LANDOR ASSOCIATES

Established leader will get some competition

IN THE last year or so the design industry has become embroiled in corporate activity as the design groups of Europe and North America have scrambled to assemble international networks.

Yet there is still only one truly international design network: Landor Associates, the Californian company that has expanded all over the world from its original base of a ferry on the San Francisco waterfront.

For over a decade Landor has dominated the world of international design. Today, thanks to the whirl of activity, it faces a markedly more competitive future.

Landor traces its origins to the late 1930s when Walter Landor, an industrial designer who had left his native Germany to live in London, travelled to San Francisco to work at the 1939 Exposition. Landor liked the city and became one of the wave of artists and artisans who left Europe in the 1930s and 1940s for a new life in the US.

In the early days his design company specialised in the design of boxes and bottles for the food and drink manufacturers of California and the Mid West. But from the very beginning it was involved in work outside the US. By the mid-1950s Walter Landor was working in the UK and Japan, as well as in his native Germany.

In the mid-1960s, when corporate identity gathered momentum in North America, Landor diversified into the new field. Initially its projects were small in scale and confined to the US but in 1969 it won a competition to redesign Alitalia, the Italian airline.

The Alitalia project established Landor as an international force. Thenceforth it expanded rapidly outside the US. In the early 1970s, at a time when its competitors were concerned with domestic business, it opened offices in Rome, Tokyo and Mexico City.

Landor's international ethos was partly the product of exigency. Its chief competitors in design were based on the East Coast where there were plenty of assignments to keep them busy. Landor's base was the West Coast, where the industrial infrastructure was less developed. It had no option but to look further afield for business.

Yet the culture inculcated by Walter Landor – with his *emigré* origins and his fondness for travel – also made a mark on the company. From the earliest days Landor had employed people from different countries. It now employs 14 different nationalities in San Francisco alone.

The Landor of today is the biggest single design company in the world. WPP, the UK marketing group, is larger overall, but its design activities are divided between a string of subsidiaries. Landor has 500 employees in 21 offices spread across 19 countries. More than 40 per cent of its \$50m (£28.5m) fee income comes from outside the US.

Landor's work embraces corporate identity, packaging and retail design. It has worked for 50 banks, from Bank of America to Barclays, and 25 airlines, from SAS to Singapore.

Its competitors carp that it has been too big for too long: and that the rigour of its research produces work that is bland or even boring. They cite a recent round of redundancies and a series of restructuring programmes as "evidence" that Landor is losing its way.

Landor prefers to point to its track record and to argue that it has more experience of international design projects than any other design company in the world.

Walter Landor retired five years ago and ceded control to a management team headed by John Diefenbach, the sober-suited business graduate who joined in the 1970s after a career in advertising and is now Landor's president.

Jardines

Corporate identity work: World Wildlife Fund, left, and Jardine, Matheson

Landor is now run (the original ferryboat is under restoration) from an 18th century warehouse on one of the streets running down to the San Francisco harbour.

Its international activities are divided between regional head offices in London, which services Europe; Tokyo for Japan; Hong Kong for the Asia-Pacific region; and New York for the East Coast of the US.

Under the current system all the creative work for each region comes from the head office. In Europe, for example, all the creative work comes from London, while marketing and project management is delegated to "local" offices in Rome, Paris or Oslo.

So far Landor has expanded by start-up and has not had recourse to acquisition. The tradition of employing people of different nationalities has helped to alleviate recruitment problems that have dogged the development of so many other international groups. It has been able to move employees around the network from country to country. The creative director in Tokyo is a Japanese designer who was trained for five years in San Francisco.

Although Landor adapts its approach to suit different clients in different cultures, it favours the same strategic approach to design consultancy all over the world. In the 1960s Walter Landor was one of the pioneers of the use of market research in design. This approach has been refined under Diefenbach.

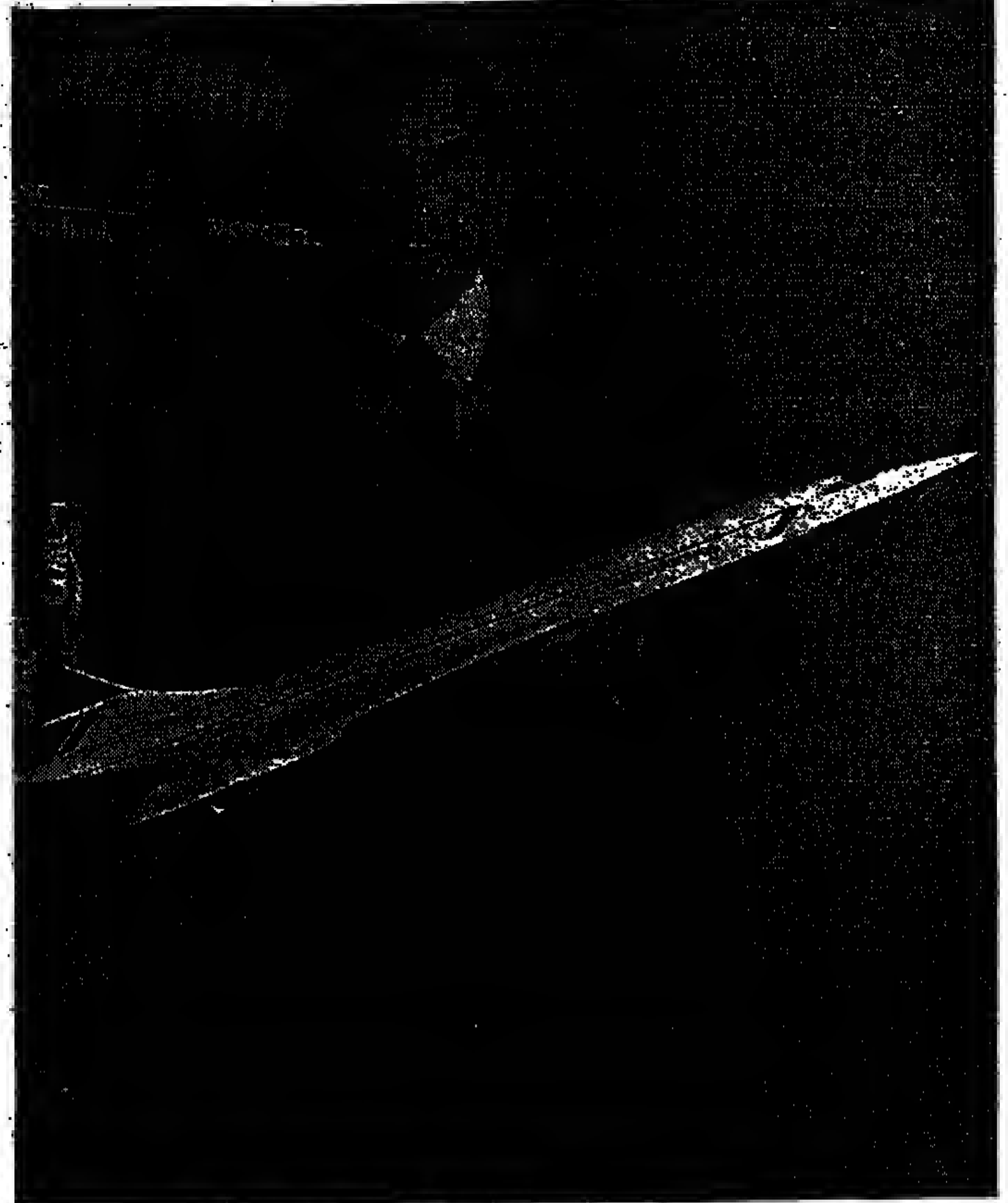
As industrial companies have become more aware of design, so design projects have become more sophisticated. The days when a corporate identity programme began and ended with a new logo are over, says Diefenbach, as are the days when companies hired and fired design consultancies for single projects.

Corporate identity, he says, now embraces the wider process of image management: involving every aspect of customer service and, increasingly, communications with employees. Moreover, companies now retain design consultancies for several years. A really ambitious project, like Landor's corporate identity work for General Electric, began three years ago. Creating a corporate identity programme for GE is like repainting the Golden Gate bridge.

Landor's internal challenge for the future is to refine its services so that it can fulfil the new, wider objectives of its design projects. Its external challenge is to fend off its new competitors in the international design field.

Despite all the acquisitions and associations in the design industry, Landor can still claim its laurels as the only truly international consultancy. But, as Diefenbach admits, the competition is stronger than ever before. Landor's dominance of the design world will soon be put to the test.

Alice Rawsthorn



Walter Landor ceded control five years ago to a team headed by John Diefenbach (above)

PROFILE: WOLFF OLINS

Tired of being top dog in Minnesota

"THIS lavatory is a symbol of our corporate mission," says Wally Olins, pointing proudly to a nondescript, but undeniably clean *gabinetto* in the basement of his London headquarters.

"Having spent 20 years lecturing our clients about the need to look after their staff, it's incumbent on us to set an example, even in the smallest details."

The chairman of Wolff Olins is famously sensitive to detail, but nowadays his long-term ambitions are resolutely global: "We're tired of being referred to as the industry leader in Britain," he says. "It's like being top dog in Minnesota."

And times have changed. If corporate identity consultancy was ever a niche market – and Olins remembers that "20 years ago, all we were selling was an *idea*" – it is now a serious business. The corporate identity market is growing each year by 30-40 per cent in the UK. The US market, estimated to be three times bigger than the UK market now, has the potential to be 10 times bigger again.

"Corporate identity among most Fortune 500 companies is extremely undeveloped," says Olins. "Most of them just have crude visual identities so ancient that nobody can remember who did them."

The European market, too, is fertile terrain. The prospect of a unified market in 1992 has provoked a series of large-scale mergers and alliances among companies anxious to reposition their products and services. These extensive changes have generated new business opportunities for communications and marketing services over and above the demand among banks and financial institutions, even public institutions – for identities distinct enough to differentiate them from their competitors.

Advertising is now perceived to be a mature industry, with only modest prospects for growth, so it is unsurprising that the identity and communications market has attracted the attention of companies that used not to take the subject seriously. American corporate identity specialists, such as Landor Associates, and marketing services multinationals, such as WPP, through its subsidiary Anspach, Grossman Portugal, and Saatchi & Saatchi, through Siegel & Gale, are now moving into what was once a Cinderella sector.

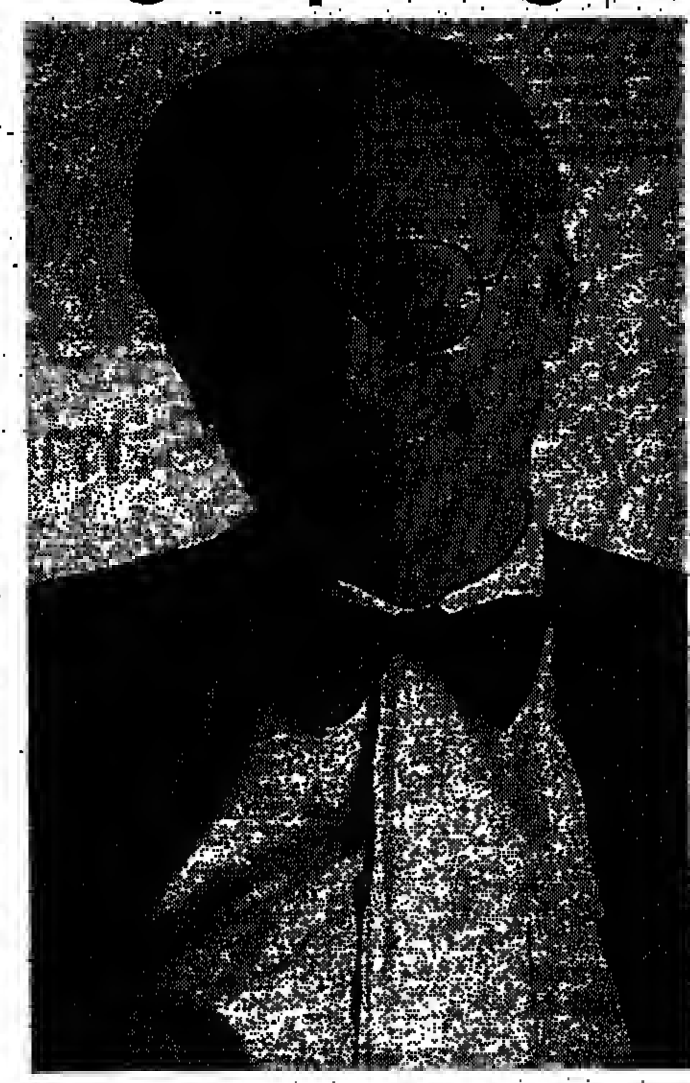
Small, coming-on-medium sized companies such as Wolff Olins, which flourished for years in a small niche market of their own creation, have little option but to fight it out. These pioneers suddenly face a choice – the big league, or relegation.

Wally Olins appears to be more confident than ever, palpably enthused by the prospect of fighting his way into the big league. And he has a Plan. Six years ago top executives of Wolff Olins met in Le Touquet to consider how best to manage very substantial growth without sacrificing profits – or the company's most important asset, its unique culture.

Olins explains: "We decided to expand *organisationally*, by broadening the range of expertise and skills available to our clients, and quantitatively, by seeking new business in the sectors where we were already strong – chemicals, financial services, oil, government institutions and the public sector. But we were determined, too, to remain the best company in the world in our market."

The Le Touquet Plan targeted key international businesses, rather than geographical markets as such; but Olins accepts that he now needs greatly to expand what he calls the "distribution system" of the company's people and skills. This task posed profound financial and management implications for what was then, and remains now, with a £12.5m turnover, a small company. "We need to generate profits of £4m a year to fund the distribution system, with the infrastructure and personnel it entails," says Olins. "Our profits last year [1988] were £1.15m; our fee income is projected to increase by 30 per cent this year. It will take us at least three years to achieve critical mass as a major player if we continue to rely on our own resources."

Among the alternatives to internally-funded, organic growth, a public flotation – the favoured option for other design industry leaders during the 1980s – is ruled out. On this matter, Olins, his independent temperament no doubt reinforced by the stock market crash, is adamant. He is open, however, to the idea of "strategic alliances with companies compatible with our approach". He reasons that this, after all, is how some potential client companies in other sectors are coping with the challenges. "Look at GEC," he says. "Why shouldn't we do the same?"



Wally Olins: has a Plan

A public flotation – a favoured option among other design industry leaders – is ruled out

But if any "significant alliances" are imminent, Olins isn't telling. And his jovial assertion that the identity business has become a "higher form of life than advertising" is hardly the language of an eager suitor chasing a big brother in that business. Wolff Olins has, in fact, worked amicably and, significantly, on equal terms, with big advertising companies before: an obvious example was the re-launch of ICI. But there are no obvious partners for Olins on the immediate horizon.

On the contrary, Wolff Olins' strenuous efforts to strengthen its internal organisation suggest that, for now at least, the company is going it alone. Wally Olins lists six areas where he considers development to be pivotal in the transformation of his company from a "first-generation, craft-based workshop" into a serious big league player.

These are:

- To establish high-level expertise in "behaviour", otherwise known as culture, or organisation and development, consultancy. This would provide a strategic addition to the core business of identity consultancy and services;
- Greatly to strengthen analytical skills, and services provision in communications. This function, which was formerly a satellite business, is to be part of the central service from now on;
- The establishment of self-financing, outreach offices in the US and in Europe;
- To develop further the profitable satellite companies which deal with implementation. Two such companies already provide architecture and interior design, and publications design and production for clients gained by contact with the core identity contracts;
- To consolidate the information, financial and management systems, such as cost control and marketing;
- To introduce a well-resourced programme of staff training and management development.

In parallel with these internal programmes, significant changes to Wolff Olins' top management will enable Olins, who is 57, to prepare for an orderly succession – an important consideration in a company which has long been perceived, if inaccurately, as being dominated by one man.

Those charged with the "professionalisation" of the company include Olins' energetic and peripatetic deputy, Brian Boylan; and the group's financial director, Charles Wright, an ex-PepsiCo man. The managing director of Wolff Olins/Identity, the core business, is Raymond Turner, formerly design director of LRT. A recent arrival is Weldon Miller, a tough marketing director with invaluable experience of corporate America following his stint at United Technologies. The appointment of an industry heavyweight to lead the new Behaviour activity will be announced shortly.

The clarity of Wolff Olins' strategy, and the calibre of the company's new management team, are cause enough for cautious optimism that the pioneering company will negotiate the stormy waters promised both by a shakeout in its industry, and by the challenge of managing the succession to a charismatic leader.

If Wolff Olins has a weakness, it lies, paradoxically, in what is now its main strength: during its formative years, the company has flourished as a compact operation – its principal assets, people and ideas. The new competitive environment may well force Wolff Olins to embrace a strategy of rapid growth – but quadrupling the supply of people and expertise is a major hurdle.

Wolff Olins, uniquely among the design success stories of the 1980s, enjoys a culture in which its people may learn and adapt to new challenges; staff training and management – late arriving, but none the less in place – will also help. But as design's star pupil, Wolff Olins faces an imminent discovery: growing up is hard to do.

John Thackara

John Thackara is managing director of Design Analysis International.

PROFILE: FITCH R-S

Driven by commercial sense

RODNEY FITCH, who has spent the past 17 years building one of the largest design groups in the world, was recently told by a prospective US client that his company did not look "serious".

The story demonstrates not only the degree of fragmentation in the £6bn global design market but how differently design companies do business on the two sides of the Atlantic.

By any standards, Fitch R-S is a design company to be taken seriously. It is driven by a strong commercial sense and determined to become one of the few truly international players in the design world.

Last year it took some major steps in its development. It integrated the UK architects Gordon Benoy, re-structured into four major divisions (product design, interior design, architecture and graphic communication), and finally agreed its £10.5m acquisition of one of the leading US product design groups — RichardsonSmith.

In spite of all this, Fitch took the decision to fly to the US personally and present to the prospective client single-handed. In retrospect he realises it was a mistake. The local competition, which fielded five marketing men and a multiple screen slide show, were rewarded with the kind of contract on which the Fitch busines built its reputation — the design of a mid-market chain of fashion stores.

"If the British design industry wants to compete in the Superleague, it is going to have to toughen up," says Fitch, who, though supported by an able management team, is still the driving force in his business.

Trained as an architect, he began his career by working for Terence Conran. After 10 years he broke away from the Conran Design Group to form his own company and rapidly pulled in one of his biggest and best-known clients, the then-dowdy Burton Group. Working with Ralph Halpern, Fitch and Company helped to segment the lack-lustre retailer into a series of new and profitable stores like Top Shop and Top Man.

Fuelled by the retail boom, including work for shopping centres and Heathrow airport terminals, Fitch and Company joined the Unlisted Securities Market in 1972 and graduated to a full listing two years later.

Today the company believes it can operate internationally without offices in Europe; but in the late 1970s and early 1980s invested substantial amounts of time and money unsuccessfully trying to establish offices in Spain and France, as well as in the Middle East. "It was a different world at the time and I didn't know any better," says Fitch.

Nevertheless, Fitch R-S has provided the City with a sustained growth in profits and turnover. Its half-year figures in September 1988 reflected the contribution made by Gordon Benoy with a £7.3m turnover and pre-tax profits of £1.5m. This represents a profit margin of 19.9 per cent, its greatest since 1982.

In common with other shares in the sector, Fitch R-S's have taken a severe tumble recently and, in common with most chairmen, Fitch believes that his shares are undervalued.

After years of buoyant growth from retail design, Fitch is now entering more competitive conditions. The uncertain outlook for consumer spending, combined with intense pressure on retail profits, could force UK retailers to reduce design budgets this year. Fitch, together with the other UK retail designers, may face the same decline in demand that hit their counterparts in the US last year.

But Rodney Fitch does not accept the argument that a reduction in retail budgets would affect his company.

"Major retailers like Sir Ralph Halpern, who have spent years building their brands into pre-eminent positions, will not allow that to drift away," says Fitch. "I don't think there is any evidence to say that they will not continue with their developments. What may well happen is that they look for people who can offer added value — the comfort of experience, research and information."

He points to the scale and changing nature of the projects on which Fitch R-S is working, from bowling alleys to 1.5m sq ft shopping centres which can soak up investments of £400m and take up to five years to complete. The benefit of a multi-disciplinary design company like Fitch R-S is that it can take a shopping centre project right through from conception to completion by calling on its graphics, research, architectural and interior design disciplines.

But breaking into new areas of design, such as products and graphics, has not been easy for Fitch R-S. In 1988 architecture and interior design accounted for 64 per cent of its turnover and a key priority for the company is to establish itself as a leader in the four fields it has defined.

In this respect RichardsonSmith offers enormous benefits. Product design accounted for more than 50 per cent of RichardsonSmith's $7.8m 1987 turnover. Its marriage with Fitch and Company has created a design group which can be said to be among the world's leaders in both retail and product design.

With a combined staff of more than 500 people operating out of five UK and US offices, Fitch R-S is arguably winning the race to become the first truly international British design group. Out in front is the American giant, Landor Associates.

But while Fitch R-S may dominate its rival in retail and product design work, it has hardly made an impact on Landor's speciality of graphics. Packaging and, more significantly, corporate identity work, do not spring to mind at the mention of Fitch R-S, even though they account for roughly 18 per cent of the company's business.

Fitch: stalking?

Given Fitch's new-found acquisitive streak, City analysts are speculating that Fitch R-S is stalking some companies in this area. Alternatively, Fitch could surround himself with marketing men and multiple screen slide shows. But that is not his style.

Rufus Olins

PROFILE: PENTAGRAM

Roots remain close to the surface

THE PARTNERS in Pentagram's West London office give the impression that they are paid for what they like doing best. It is design itself that interests them, not the business of running and developing a company. Unlike contemporaries such as Fitch R-S and Michael Peters, their 1970s roots are never far from the surface.

Conventional marketing techniques, for example, are frowned on. Instead of investing in marketing executives and advertising budgets, Pentagram publishes a series of quirky and beautifully produced pamphlets called The Pentagram Papers, prints a gift book each Christmas and takes on high profile but unprofitable pieces of business such as the re-design of book jackets for Faber and Faber.

"We don't make money doing Faber and Faber," says one of the partners, John McConnell. "It's just an incredible delight which we do for the hell of it. Of course it's a perfect showcase and it could be argued it's what we do instead of having a salesforce."

It has proved a very successful formula. With a staff of 120 and offices in London, New York and San Francisco, the privately-owned Pentagram claims more than 200 clients and admits to a turnover of $15m for its last trading year. Profits it will not reveal.

There are 13 mini profit centres within the organisation, each run by a shareholding designer. Since its formation in 1972, Pentagram has operated on the principle that a design guru leads his own small team of disciples — whether it be Kenneth Grange shaping the look of every-day products from the Kenwood Chef to the 125 high speed train, or David Hillman transforming the look of magazines and newspapers.

"The Achilles' heel is that you have 13 people all rushing to the grave at the same rate and, while of course they are the drivers, that is a weakness," says McConnell. None of the employees at Pentagram has ever been made a partner. In 1987 the company changed its structure for the first time in its history by introducing associates who run their own jobs without sharing in the company profits.

This first step towards a more traditional structure took place not just because of the company's growth (it has doubled in size every three years) but because of the difficulty of finding new partners.

The company began with five (Theo Crosby, Alan Fletcher, Colin Forbes, Mervyn Kurlansky and Kenneth Grange) and although it now has 13, there have been no additions to the UK set-up since Colin Forbes moved to the US eight years ago.

In addition to the four original founders who have stayed in the UK, are McConnell and Hillman. The six partners who now work out of the London office have each built formidable reputations for themselves in the world of design and say that they would only consider inviting creatives of an equal stature to trade under the Pentagram name.

The newest recruit, Hillman, arrived 11 years ago. He had already worked as an art director on Nova magazine, set up his own practice and and designed the daily French newspaper, Le Matin de Paris. He is currently working on the design of four European publications and his influence in Britain can be seen in the look of the New Statesman and Society and the radical shake-up of The Guardian.

McConnell came to Pentagram very soon after the company was formed, having completed the much admired art nouveau identity for Biba, the fashionable 1960s boutique. He has since gone on to carry out corporate identities and massive packaging programmes for companies including Lucas Industries, the London Docklands Development Corporation and Boots.

Messrs Crosby, Fletcher, Kurlansky and Grange are just as accomplished. Grange, for example, through his work for British Rail, Kenwood, Venner and Parker, has established himself as Britain's most successful product designer. Today he generates an increasing amount of work from Japan, from a gas heater for the Osako Gas Company to car wheels for the Nippon Metal Company.

Recognising that they have to find new areas for growth, the UK partners are constantly looking for new blood of the right calibre, but catching the élite before it becomes locked in somewhere else has proved a problem. Meanwhile, Pentagram's founding architect, Colin Forbes, has been finding it less difficult in the US. Since his arrival in 1980, Forbes has built up the New York business to the extent that with its four partners it is now said to contribute as much to Pentagram's profits as the London office.

The three-year-old West Coast office is smaller and represents another break with the Pentagram tradition since its three partners were taken on simultaneously. In both New York and San Francisco the majority of the work consists of annual report and brochure design.

Although the mix is more varied in the UK overall, 10 of the 13 Pentagram partners specialise in graphics. Business is buoyant, despite the growing number of competitors picking up prestigious pieces of business.

Pentagram could even be said to be losing out in some areas, but McConnell remains sanguine about the future. "There is still an enormous amount of the type of business we are interested in, where we don't have suddenly to pretend to be something which we are not," he says. "It may be twee but to enjoy what we do is still the major aim in the way we run our business."

Rufus Olins

Pentagram partners. Left to right, top row: Alan Fletcher, Neil Shakery. Middle row: Theo Crosby, John McConnell, Kit Hinrichs, Linda Hinrichs, David Hillman, Peter Harrison. Front row: Colin Forbes, Mervyn Kurlansky, Kenneth Grange. (Not pictured: Etan Manasse, Woody Pirtle)

DESIGN 6

Alice Rawsthorn provides a guide to who's who

The top ten international design networks

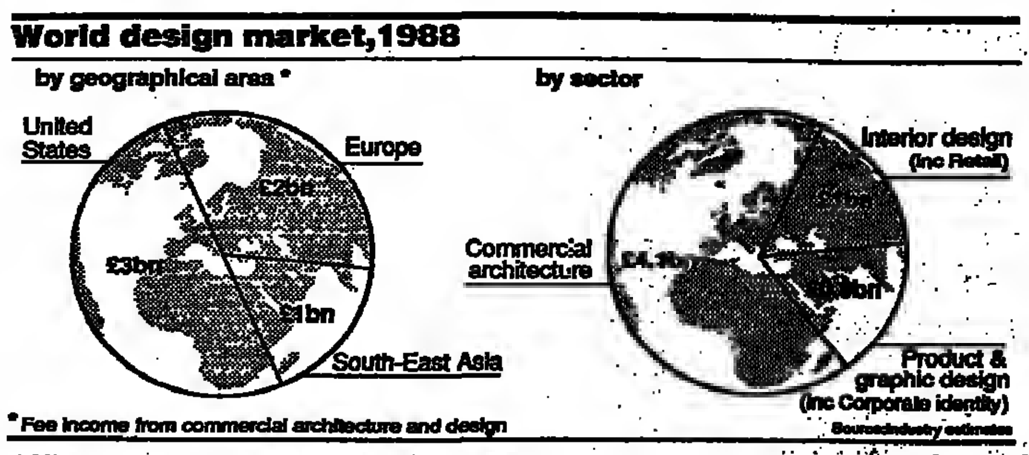
1. WPP Group
£57.5m fee income
860 employees
Subsidiary of WPP Group (UK)
Headquarters: London
Since Martin Sorrell took control in 1985, WPP has become the world's biggest design group by buying a succession of design consultancies in the US and the UK. In contrast to Landor and Siegel & Gale, WPP favours allowing its businesses to operate autonomously within their markets, rather than welding them into a homogenous global network.

2. Landor Associates
£28.2m fee income
500 employees
US private company
Headquarters: San Francisco
Despite the flurry of corporate activity that has swept through the industry in recent years, Landor is still the only truly global consultancy. Landor has expanded rapidly from its original base of a ferry in San Francisco harbour to open offices all over the world. It has, however, revised and restructured its network over the years.

3. Michael Peters Group
£22.5m fee income
720 employees
UK public company
Headquarters: London
Since going public five years ago, Michael Peters has combining international expansion with diversification into new disciplines to augment its traditional business as the UK's largest packaging designer. It has, however, encountered problems with Hambrecht Terrell, the US retail designer and its most ambitious acquisition to date.

4. Addison Consultancy
£20m fee income
300 employees
UK public company
Headquarters: London
Addison is the product of a series of mergers and acquisitions over the years. Through Allied International Designers it was one of the pioneers of corporate identity in the UK, but it has since suffered from financial problems. Despite successive rounds of restructuring it is still hounded by bid speculation.

World design market, 1988



* Fee income from commercial architecture and design
Source: industry estimates

5. Fitch-RS
£17.4m fee income
500 employees
UK public company
Headquarters: London
Having made its name within retail design in the UK, Fitch is pursuing a strategy of broadening the base of its business both by international expansion and by moving into new disciplines. The acquisition of Richardson-Smith last summer furnished it with a North American base and with expertise in product design.

6. Siegel & Gale
£16.5m fee income
230 employees
Subsidiary of Saatchi & Saatchi (UK)
Headquarters: New York
Saatchi and Saatchi, the aggressive marketing services group, acquired Siegel & Gale, a leading US corporate identity specialists, in 1985 to act as the base for a global design network to complement its other activities. S&G is now expanding at a frenetic pace in an attempt to rival Landor by assembling a world-wide network.

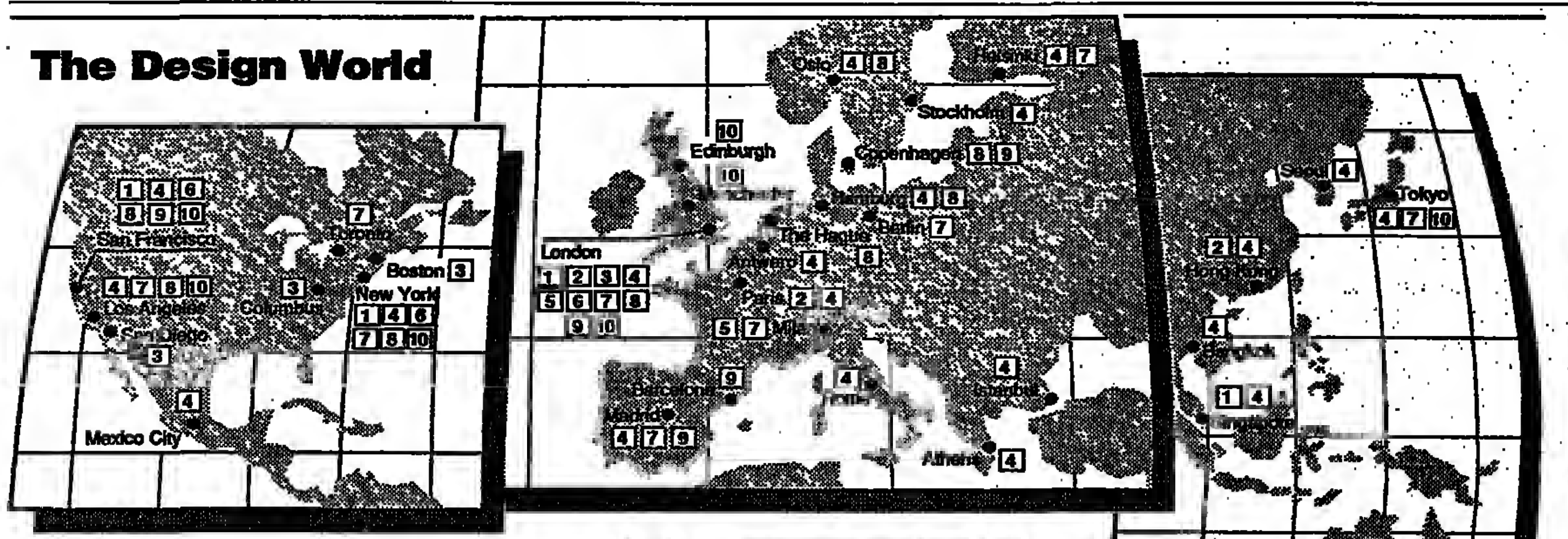
7. Pentagram
£8.8m fee income
120 employees
UK private company
Headquarters: London
Pentagram is a law unto itself in the design world. It is probably the only truly multi-disciplinary international consultancy, which services clients world-wide from its offices in the UK and US. Its reputation for quality and creativity ensures its involvement in many of the most prestigious international projects.

8. Conran Design Group
£8.5m fee income
240 employees
Subsidiary of Storehouse (UK)
Headquarters: London
Although Conran is still inextricably linked with Storehouse, the UK retailing group controlled by Sir Terence Conran, a large tranche of its work is for external clients. It has had a Paris office for several years and has just expanded in Asia-Pacific by opening a new office in Hong Kong.

9. Wolff Olins
£7.6m fee income
180 employees
UK private
Headquarters: London
Wolff Olins is established as Europe's leading corporate identity consultancy with projects for multinational chemical companies like ICI of the UK and Akzo of the Netherlands. It has also led the expansion of UK consultancies in the public sector through its work for government departments and for the Metropolitan Police.

10. Minale Tattersfield
£5m fee income
55 employees
UK private company
Headquarters: London
Minale Tattersfield made its name in the UK as one of the liveliest and most creative corporate identity specialists but is involved in other areas such as packaging. It has opened offices across Europe and Asia-Pacific. Last autumn it moved into Australia by acquiring an interest in Bryce Design.

The Design World



1 Addison Consultancy (all wholly-owned subsidiaries)
2 Conran Design Group (all wholly-owned subsidiaries)
3 Fitch-RS (all wholly-owned subsidiaries)
4 Landor Associates (all wholly-owned subsidiaries)
5 Minale Tattersfield (all associates)
6 Pentagram (all wholly-owned subsidiaries)
7 Michael Peters Group (all wholly-owned subsidiaries)
8 Siegel & Gale (all wholly-owned subsidiaries)
9 Wolff Olins (all associates except SF, a wholly-owned subsidiary)
10 WPP Group (all wholly-owned subsidiaries)

YOUNG TALENT

Next for the top

ONCE THE dust has settled on all the acquisitions and associations that have reshaped the design world in the last year or so, design should emerge as a more mature industry.

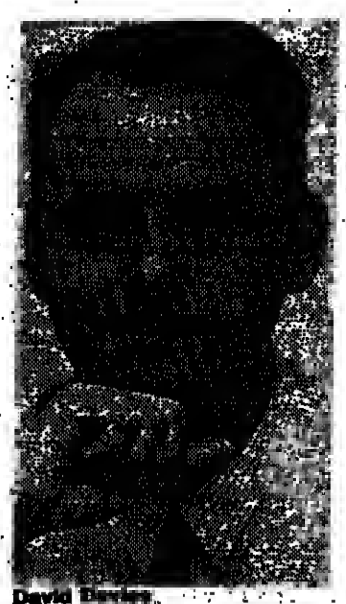
Yet the industry is still highly fragmented in structure and despite the emergence of the giant international groups, the industry is still dominated by small, entrepreneurial companies.

It costs next to nothing to set up in business as a designer. As a result it is still relatively easy for young designers – with lots of talent and little capital – to make their names.

David Davies, who has become one of the most successful European retail designers in the 1980s, acts as an apt example.

His company, David Davies Associates, was formed in London six years ago. It already has a turnover of £8m and employs 130 people.

DDA made its name in the UK through its work for Next: until recently regarded as one of the significant retail successes of the 1980s. In 1988 it executed its first US project by designing the Paul Harris women's wear stores. It has since worked for Valentino, the Italian fashion designer, and Mexx, the Dutch fashion group.



David Davies

Davies is only one of a number of young designers to have made their mark in recent years. Neville Brody has emerged as one of the world's most influential graphic designers after his early work for the Face magazine in London.

Ettore Sottsass has moved from his base in furniture design in Milan to take on other projects such as the European stores for Esprit, the US fashion company.

Philippe Starck, meanwhile, who made his name in France as a furniture designer, is now one of the best known international interior designers after his work for Café Costes in Paris and the Royalton Hotel in New York.

Alice Rawsthorn